



FARE STRUCTURE EXPERIMENT REPORT

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lection Task Force

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Chicago Transit Authority

April 26, 1983

To: Mr. Bernard Ford, Executive Director

From: Fare Collection Task Force Committee

Re: Recommendations for Dollar Bill Problem
Fare Structure Experiment

It is recommended that the CTA experiment with a "No Transfer" fare structure, under which rates of fare for each vehicle would be 50¢ for bus and 75¢ for rail. A \$40 monthly pass would continue to be usable on any vehicle. Reduced fare passengers would pay no more than 50% of the full fares. The recommendation for this experiment is prompted by the need for a short-term solution to the bus system dollar bill problem which has plagued the CTA for the last two years. Further, there appears to be an opportunity to experiment with fares and thereby learn much more about our passengers, in that our projections indicate that the combination of fare box revenue produced and cost savings to accrue from this proposed structure will very likely equal the revenues produced from our current fare structure. We continue to view the long-term solution to our dollar bill problem to be the installation of a fare collection system which is designed to handle large volumes of dollar bills, and the preparation of specifications to achieve this end is proceeding. Benefits to accrue from this recommended fare structure experiment include:

1. Virtual elimination of dollar bills in the bus system.
2. Increased ridership resulting from a fare decrease for 44% of our cash fare paying passengers.
3. Elimination of transfer misuse and abuse.
4. Reduction of fare abuse related to the present use of dollar bills and/or large numbers of coins.
5. Cost Savings accruing from reduced dollar bill handling, farebox/cashbox "pulling" and maintenance activities and elimination of transfer printing and distribution.

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Important features of this recommended experiment include:

1. Higher fares would be charged on the rail system vs. the bus system. This concept is based upon the rail system's delivery of faster service and longer distance riding by passengers on rail vs. bus.
2. Significant increases in pass usage is expected.
 - A. A bi-weekly pass priced at \$20 is recommended in addition to the \$40 monthly pass. This should reduce the impact on those passengers who find it difficult to outlay \$40 at one time.
 - B. A bi-weekly pass priced at \$9 for senior citizens and handicapped passengers is recommended in addition to the present \$18 monthly pass.
 - C. New bi-weekly and monthly passes priced at \$9 and \$18 respectively are recommended for students. Such passes would be available for students who are currently eligible for reduced fares and would be usable under the same conditions that currently apply to this ridership category.
 - D. An expanded pass distribution network will be required and commission payments to sellers of passes is recommended. Commissions are recommended to start at 1% of pass value and be adjusted as required.
3. Full fare tokens would be priced at 75¢ with major usage foreseen on the rail system.
4. Premium fares would apply to express bus trips, on a one-way only basis, as they do presently.

Documents supporting this recommendation include the narrative and financial projection schedules entitled:

1. Fare Structure Alternatives revised April, 1983
2. Fare Collection Task Force submission to Bernard J. Ford dated September 30, 1982.
3. Pass Commission Survey
4. Title VI Minority Impact Analysis
5. Regional Transportation, Express Bus, and Evanston surcharge recommendations.

FARE STRUCTURE

ALTERNATIVES

Farebox Task Force
Finance Division
February, 1983

Revised
4/25/83

CHICAGO TRANSIT AUTHORITY
Fare Structure Alternatives

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FARE STRUCTURE NARRATIVE

Attached is a series of financial and ridership projections relating to CTA fare structure alternatives. Consideration of fare structure alternatives is prompted by a desire for a short-term solution to the bus system dollar bill problem which has plagued the CTA for the past two years. The long-term solution to this problem continues to be the installation of fareboxes which are designed to handle large volumes of dollar bills.

DOLLAR BILL PROBLEM - BUS SYSTEM

When CTA fares were increased from 60¢ to 80¢ in early 1981, dollar bill volumes increased from 30,000 per day to 80,000 per day. When fares were further increased to 90¢ in mid-1981, dollar bill volume zoomed to almost 300,000 per day. Discounted tokens and the "ban the buck" campaigns temporarily reduced the daily volume of dollar bills down to 150,000. However, each day the volume creeps upward, and currently averages somewhat over 180,000 bills per day. Fare boxes currently in use served the CTA well from 1970 until two years ago. The fare box collection system was built with coins in mind. The system was very secure before the advent of heavy dollar bill usage. This system was not designed to handle dollar bills, and therefore, significant added costs have been incurred over the last two years in an effort to force the system to accept dollar bills.

PROJECTION OF FARES

Shown in the attached schedules is a ten year projection of operating expenses and revenues required, assuming a 4% average annual rate of inflation. Using the current fare structure, fares have been projected on the assumption of a 50% "fare box recovery ratio" over the next ten years.

ALTERNATIVE FARE STRUCTURES

The package includes projections for alternative fare structures entitled "NO-Transfer Fare Structure" and "Prepaid Incentive Fare Structure". Both concepts, in the initial stages, should virtually eliminate the use of dollar bills on the bus system.

NO-TRANSFER FARE STRUCTURE

The no-transfer fare structure is based upon the concept of separate fares for each vehicle which passengers ride. Projections of revenue

produced under three alternatives are shown for fare rates as follows:

Bus		Rail		Monthly Pass	
<u>Full</u>	<u>Reduced</u>	<u>Full</u>	<u>Reduced</u>	<u>Full</u>	<u>Reduced</u>
50¢	25¢	75¢	35¢	\$40	\$18
50¢	25¢	65¢	30¢	\$40	\$18
60¢	30¢	75¢	35¢	\$40	\$18

Major assumptions upon which these projections are based include:

1. Acceptance of the concept of a higher fare on rail vs bus based upon delivery of faster service and longer distance riding by passengers.
2. Current ridership distribution as determined by the Operations Planning Department (See Page 14). Its surveys indicate that of current full-fare paying passengers who pay cash or use tokens, 44% ride one vehicle and 56% use more than one vehicle.
3. Cost savings will occur related to dollar bill handling, farebox/cashbox "pulling" and maintenance, and transfer printing and distribution. Documentation is included in the Fare Collection Task Force Report dated September 30, 1982.
4. Additional revenue will accrue from the elimination of transfers and reduction of fare abuse.
5. Significant shifts in fare paying mode from cash to passes will occur. It is assumed that to avoid a fare increase, regular riders who currently purchase transfers will purchase passes under this new fare structure. It is assumed that pass usage will more than double.
6. In addition to the monthly pass priced at \$40, a bi-weekly pass priced at \$20 would be introduced in order to reduce the out-of-pocket outlay required to purchase riding passes. An expanded distribution network will be required and commission payments to sellers of passes will need to be considered.
7. The introduction of a bi-weekly pass for senior citizens and handicapped passengers priced at \$9 is assumed to go along with the present \$18 monthly pass for these categories of passengers. It is assumed

also that bi-weekly and monthly passes will be introduced for students who are currently eligible for reduced fares and would be usable under the same conditions that currently apply to this class of riders. Such new pass is recommended in order to avoid fare increases for students who transfer more than once or ride both the bus and rail systems. It is noted that the number of reduced fare passengers projected to shift into passes is considerably less, compared to the class as a whole, than is the case with full-fare paying passengers. This is because reduced fare riders do not take as many multiple vehicle trips or bus/rail trips as do full-fare paying passengers.

8. Full fare tokens would be priced at 75¢ and, therefore, from a practical point of view, become a convenience for rail vehicle riders.
9. Premium fares would apply to express bus trips on the same basis as they do currently, that is, one-way only.
10. An increase in ridership will result in the categories of passengers who will experience a fare decrease, i.e., one vehicle riders. Likewise, a decrease in ridership among the multiple vehicle, non-regular riders will probably occur. This fare structure results in a fare decrease for 44% of our current cash paying passengers. Regular, daily multiple vehicle passengers who purchase passes will not experience a fare increase. Only those multiple vehicle passengers who use the CTA once in a while, for whom passes are of no benefit, would experience a fare increase.

PREPAID INCENTIVE FARE STRUCTURE

Projections of revenue produced under three scenarios are shown. Major assumptions upon which these projections are based include:

1. The present fare structure would remain pretty much intact with the major exception that 50¢ extra would be charged for anyone who pays cash in lieu of using tokens or passes. This notion stems from the commuter rail experience wherein a 50¢ extra charge is required for payment of fares on the trains. Percentage benefits of fare prepayment via passes or tokens versus payment of cash fares would be similar to the differentials that apply on the commuter railroads. Fare prepayments would result in benefits to passengers exceeding 50%.

2. Tokens would continue to be priced at 10 for \$8.50 with substantial increased usage assumed.
3. Substantial shifting of passengers from cash paying to pass and token users would occur. No changes in fare structure would occur for reduced fare passengers. Dollar bill collection problems do not apply to this category of passenger.
4. Cost savings will accrue as a result of reduced dollar bill handling and reduced farebox/cashbox "pulling" and maintenance activities.
5. Additional revenue will accrue from a reduction of fare abuse.

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Summary
 Fare Structure Alternatives
 Comparison of Alternative 1983 Projections
of Fare Box Revenue Produced

	<u>Best Case Projection</u>	<u>Worst Case Projection</u>
Revenue Required - Fiscal 1983 \$267.1		
<u>No-Transfer Fare Structure</u>		
50¢ Bus, 75¢ Rail - Farebox Revenue Produced	\$257.4	\$251.9
Additional Savings, Revenues and Costs	<u>21.7</u>	<u>5.8</u>
TOTAL	\$279.1	\$257.7
(Shortfall) - Surplus from Required	\$ 12.0	\$ (9.4)
50¢ Bus, 65¢ Rail - Farebox Revenue Produced	\$250.9	\$246.5
Additional Savings, Revenues and Costs	<u>21.4</u>	<u>5.9</u>
TOTAL	\$272.3	\$252.4
(Shortfall) Surplus from Required	\$ 5.2	\$(14.7)
60¢ Bus, 75¢ Rail - Farebox Revenue Produced	\$267.0	\$258.0
Additional Savings, Revenues and Costs	<u>20.3</u>	<u>4.9</u>
TOTAL	\$287.3	\$262.9
(Shortfall) - Surplus from Required	\$ 20.2	\$ (4.2)
<u>Prepaid Incentive Fare Structure</u>		
Farebox Revenue Produced	\$279.1	\$273.5
Additional Savings, Revenues and Costs	<u>11.5</u>	<u>1.6</u>
TOTAL	\$290.6	\$275.1
(Shortfall) Surplus from Required	\$ 23.5	\$ 8.0

CHICAGO TRANSIT AUTHORITY

PROJECTED FARES REQUIRED TO PRODUCE REVENUES
OF 50% OF OPERATING COST

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 ^a
Assumption 1: 4% annual inflation rate; expected revenue produced must equal or exceed farebox revenue required										
Farebox Revenue Required	267.1	294.7	304.8	315.2	326.3	338.0	350.0	362.6	375.8	389.8
Base Fare - Adult	.90	1.00	1.05	1.10	1.15	1.25	1.30	1.35	1.40	1.45
Base Fare - Reduced	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85
Monthly Pass	40.00	45.00	47.50	50.00	52.50	55.00	57.50	60.00	62.50	65.00
Expected Revenue Produced	270.5	294.4	306.0	317.2	328.6	344.9	356.6	365.8	377.4	389.5
Assumption 2: 4% annual inflation rate; expected revenue produced plus surplus of prior year revenue produced must approximate farebox revenue required										
Farebox Revenue Required	267.1	294.7	304.8	315.2	326.3	338.0	350.0	362.6	375.8	389.8
Prior Year (Surplus) Deficiency	-	-	.3	(.9)	(2.9)	(5.2)	(4.0)	1.1	(2.1)	(4.2)
Net Farebox Revenue Required	267.1	294.7	305.1	314.3	323.4	332.8	346.0	363.7	373.7	385.6
Base Fare - Adult	.90	1.00	1.05	1.10	1.15	1.20	1.25	1.35	1.40	1.45
Base Fare - Reduced	.40	.45	.50	.55	.60	.60	.65	.75	.80	.85
Monthly Pass	40.00	45.00	47.50	50.00	52.50	55.00	55.00	60.00	62.50	65.00
Expected Revenue Produced	270.5	294.4	306.0	317.2	328.6	336.8	344.9	365.8	377.4	389.5
Estimated Daily Full Volume - Bus ^a	180,000	200,000	210,000	220,000	225,000	250,000	250,000	275,000	280,000	290,000

^aAssuming a full fare and a system with discounted token

CHICAGO TRANSIT AUTHORITY

1983 - 1992

OPERATING EXPENSES AND REVENUE REQUIRED
AT 4% AVERAGE ANNUAL INFLATION

	1982 ⁽¹⁾	1983 ⁽²⁾	1984	1985	1986	1987	1988	1989	1990	1991	1992
Operating Expenses											
Labor	\$374.3	\$431.6	\$459.8	\$474.6	\$489.8	\$505.9	\$523.1	\$540.8	\$559.4	\$578.8	\$599.5
Material	12.5	43.4	44.3	46.1	47.9	49.9	51.9	53.9	56.1	58.3	60.7
Fuel	25.7	27.6	28.2	29.3	30.5	31.7	33.0	34.3	35.7	37.1	38.6
Power	14.2	18.2	19.0	19.8	20.6	21.4	22.2	23.1	24.1	25.0	26.0
Injuries and Damages	10.5	3.2	11.8	12.1	12.5	12.9	13.3	13.7	14.1	14.5	15.0
Other	31.6	47.3(5)	29.8	41.4	43.1	44.8	46.6	48.5	50.4	52.4	54.5
Total Operating Expense	493.8	571.3	602.9	623.3	644.4	666.6	690.1	714.3	739.8	766.1	794.1
Public Funding											
50% of Operating Expense	246.9	285.6	301.4	311.6	322.2	333.3	345.0	357.1	369.9	383.0	397.1
System Generated Revenue Required	246.9	285.7	301.5	311.7	322.2	333.3	345.1	357.2	369.9	383.1	397.2
Farebox Revenue (at current fares) ⁽¹⁾	262.9	270.5	273.2	275.9	278.7	281.5	284.3	287.1	290.0	292.9	295.8
Other Revenue	8.6	18.6	6.8	6.9	7.0	7.0	7.1	7.2	7.3	7.3	7.4
Additional Farebox Revenue Required	(24.6)(4)	(3.4)(4)	21.5	28.9	36.5	44.8	53.7	62.9	72.6	82.9	94.0
Total Farebox Revenue Required	\$218.3	\$267.1	\$294.7	\$304.8	\$315.2	\$326.3	\$338.0	\$350.0	\$362.6	\$375.8	\$389.8

(1) Actual for 1982

(2) Budgeted for 1983

(1) Assumes 1% annual increase in ridership

(4) Excess over amount equal to 50% of operating cost

(5) Includes interest of \$8.2 million on pension fund debt which is payable in 1986.

CHICAGO TRANSIT AUTHORITY

NO TRANSFER FARE STRUCTURE

	1982		1983 (F)	
	Projection* #1	Projection* #2	Projection* #1	Projection* #2
FARE- 50¢ Bus, 75¢ Rail, \$40 Monthly Pass See Page 9				
Farebox Revenue Required (A)	\$262.9	\$262.9	\$267.1	\$267.1
Farebox Revenue Produced	<u>246.8</u>	<u>241.5</u>	<u>257.4</u>	<u>251.9</u>
Difference - Shortfall (E)	\$ 16.1	\$ 21.4	\$ 9.7	\$ 15.2
Additional Savings Revenues & Costs				
Cost Savings (B)	\$4.5	to \$ 8.5	\$4.5	to \$ 8.5
Additional Revenue (C)	3.2	to 16.0	3.2	to 16.0
Less Added Costs (D)	<u>(1.9)</u>	to <u>(2.8)</u>	<u>(1.9)</u>	to <u>(2.8)</u>
Total	<u>\$5.8</u>	to <u>\$21.7</u>	<u>\$5.8</u>	to <u>\$21.7</u>
FARE - 50¢ Bus, 65¢ Rail, \$40 Monthly Pass see Page 11				
Farebox Revenue Required (A)	\$262.9	\$262.9	\$267.1	\$267.1
Farebox Revenue Produced	<u>240.6</u>	<u>236.3</u>	<u>250.9</u>	<u>246.5</u>
Difference - Shortfall (E)	\$ 22.3	\$ 26.6	\$ 16.2	\$ 20.6
Cost Savings & Additional Revenues				
Cost Savings (B)	\$4.5	to \$ 8.5	\$4.5	to \$ 8.5
Additional Revenue (C)	3.2	to 16.0	3.2	to 16.0
Less Added Costs (D)	<u>(1.8)</u>	to <u>(3.1)</u>	<u>(1.8)</u>	to <u>(3.1)</u>
Total	<u>\$5.9</u>	to <u>\$21.4</u>	<u>\$5.9</u>	to <u>\$21.4</u>
FARE - 60¢ Bus, 75¢ Rail, \$40 Monthly Pass See Page 13				
Farebox Revenue Required (A)	\$262.9	\$262.9	\$267.1	\$267.1
Farebox Revenue Produced	<u>256.0</u>	<u>247.4</u>	<u>267.0</u>	<u>258.0</u>
Difference - Shortfall (E)	\$ 6.9	\$ 15.5	\$.1	\$ 9.1
Cost Savings & Additional Revenues				
Cost Savings (B)	\$4.5	to \$ 8.5	\$4.5	to \$ 8.5
Additional Revenue (C)	3.2	to 16.0	3.2	to 16.0
Less Added Costs (D)	<u>(2.8)</u>	to <u>(4.2)</u>	<u>(2.8)</u>	to <u>(4.2)</u>
Total	<u>\$4.9</u>	to <u>\$20.3</u>	<u>\$4.9</u>	to <u>\$20.3</u>

*See Page 15 for Footnotes and Assumptions used as a basis for these projections.

- (A) Actual for 1982
 (B) Cost savings resulting from reduction of dollar bills
 (C) Additional revenue attributable to reduction of transfer and fare abuse.
 (D) Costs of increased monthly and/or biweekly pass sales.
 (E) Shortfall is the difference between revenue required and revenue produced.
 (F) Farebox Revenue Produced for 1983 is based upon 1982 assumptions plus 4.3% which covers an extra week in CTA fiscal 1983 and increased ridership resulting from O'Hare Extension.
- } See Page 16

CHICAGO TRANSIT AUTHORITY

NO TRANSFER FARE STRUCTURE

Comparison of Current Annual Ridership/Revenue to
Projections Assuming Shifts of Cash Paying Passengers

(In Millions)

50¢ Bus, 75¢ Rail

\$40 Monthly Pass

Shift of Cash
Fare Paying Passengers
To Monthly Pass Based
on Economic
Advantage of Pass

	1982 Ridership/ Fare Structure	Projection* 1	Projection ^a 2
<u>Cash Fares</u>			
<u>Adult</u>			
# Linked Trips	187.1	169.3	149.4
\$ Revenue	\$178.8	\$142.6	\$117.6
<u>Reduced Fare</u>			
# Linked Trips	80.7	75.0	72.8
\$ Revenue	\$36.8	\$28.6	\$27.4
<u>Monthly Pass</u>			
<u>Adult</u>			
# Linked Trips	58.9	81.3	101.2
# Annual Purchases	1.1	1.7	2.2
\$ Revenue	\$45.3	\$69.4	\$89.3
<u>Reduced</u>			
# Linked Trips	6.4	15.0	17.2
# Annual Purchases	.1	.3	.4
\$ Revenue	\$2.0	<u>\$6.2</u>	<u>\$7.2</u>
<u>Total</u>			
# Linked Trips	333.1	340.6	340.6
\$ Revenue	<u>\$262.9</u>	<u>\$246.8</u>	<u>\$241.5</u>

Decrease from 1982 Revenue

Amount	-	\$(16.1)	\$(21.4)
%	-	(6.1)%	(8.1)%

*See Page 15 Footnotes and Assumptions

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure

Schedule of Ridership Distribution
and Pass Benefit

50¢ Bus, 75¢ Rail

Category and Type of Rider	Linked Trips	\$ Current Cash Ridership	Cash Fare	*Estimated Monthly Expenditure	Economic Advantage of Pass	
					\$ Monthly Benefit	% Benefit
Adult						
Bus	48.8	26.1	\$.50	\$21.00	\$(19.00)	-
Rail	34.5	18.4	.75	31.50	(8.50)	-
Bus-Bus	28.0	15.0	1.00	42.00	2.00	5.0%
Bus-Rail	49.9	26.7	1.25	52.50	12.50	31.3%
Bus-Bus-Bus	7.4	4.0	1.50	63.00	23.00	57.3%
Bus-Bus-Rail	13.3	7.1	1.75	73.50	33.50	83.8%
Bus-Bus-Bus-Bus	1.9	1.0	2.00	84.00	44.00	110.0%
Bus-Bus-Bus-Rail	3.3	1.7	2.25	94.50	54.50	136.3%
	<u>187.1</u>	<u>100.0%</u>				
Reduced						
Bus	33.1	41.0	\$.25	\$10.50	\$(7.50)	-
Rail	4.1	5.1	.35	14.70	(3.30)	-
Bus-Bus	25.1	31.1	.50	21.00	3.00	16.7%
Bus-Rail	7.5	9.3	.60	25.20	7.20	40.0%
Bus-Bus-Bus	6.7	8.3	.75	31.50	13.50	75.0%
Bus-Bus-Rail	2.0	2.5	.85	35.70	17.70	98.3%
Bus-Bus-Bus-Bus	1.7	2.1	1.00	42.00	24.00	133.3%
Bus-Bus-Bus-Rail	0.5	.6	1.10	46.20	28.20	156.7%
	<u>80.7</u>	<u>100.0%</u>				
Monthly Pass						
Adult	58.9					
Reduced	<u>6.4</u>					
Total Linked Trips	<u>333.1</u>					

*Estimated Monthly Expenditure
Cash Fare x 2 trips per day x 21 days per month.

CHICAGO TRANSIT AUTHORITY

NO TRANSFER FARE STRUCTURE

Comparison of Current Annual Ridership/Revenue to
Projections Assuming Shifts of Cash Paying Passengers

(In Millions)

50¢ Bus, 65¢ Rail

\$40 Monthly Pass

Shift of Cash
Fare Paying Passengers
To Monthly Pass Based
on Economic
Advantage of Pass

1982
Ridership/
Fare Structure

Projection*
1

Projection*
2

Cash FaresAdult

Linked Trips

187.1

175.0

149.9

\$ Revenue

\$178.8

\$141.3

\$112.3

Reduced Fare

Linked Trips

80.7

72.1

69.1

\$ Revenue

\$36.8

\$26.9

\$25.2

Monthly PassAdult

Linked Trips

58.9

76.8

101.9

Annual Purchases

1.1

1.6

2.3

\$ Revenue

\$45.3

\$64.9

\$90.0

Reduced

Linked Trips

6.4

18.1

21.1

Annual Purchases

.1

.4

.5

\$ Revenue

\$2.0

\$7.5

\$8.8

Total

Linked Trips

333.1

342.0

342.0

\$ Revenue

\$262.9

\$240.6

\$236.3

Decrease from 1982 Revenue

Amount

-

\$(22.3)

\$(26.6)

%

-

(8.5)%

(10.1)%

*See Page 15. Footnotes and Assumptions

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure

Schedule of Ridership Distribution
and Pass Benefit

50¢ Bus, 65¢ Rail

Category and Type of Rider	Linked Trips	% Current Cash Ridership	Cash Fare	*Estimated Monthly Expenditure	Economic Advantage of Pass	
					\$ Monthly Benefit	% Benefit
Adult						
Bus	48.8	26.1	\$.50	\$21.00	\$(19.00)	-
Rail	34.5	18.4	.65	27.30	(12.70)	-
Bus-Bus	28.0	15.0	1.00	42.00	2.00	5.0%
Bus-Rail	49.9	26.7	1.15	48.30	8.30	20.8%
Bus-Bus-Bus	7.4	4.0	1.50	63.00	23.00	57.5%
Bus-Bus-Rail	13.3	7.1	1.65	69.30	29.30	73.3%
Bus-Bus-Bus-Bus	1.9	1.0	2.00	84.00	44.00	110.0%
Bus-Bus-Bus-Rail	3.3	1.7	2.15	90.30	50.30	125.8%
	<u>187.1</u>	<u>100.0%</u>				
Reduced						
Bus	33.1	41.0	\$.25	\$10.50	\$(7.50)	-
Rail	4.1	5.1	.30	12.60	(5.40)	-
Bus-Bus	25.1	31.1	.50	21.00	3.00	16.7%
Bus-Rail	7.5	9.3	.55	23.10	5.10	28.3%
Bus-Bus-Bus	6.7	8.3	.75	31.50	13.50	75.0%
Bus-Bus-Rail	2.0	2.5	.80	33.60	15.60	86.7%
Bus-Bus-Bus-Bus	1.7	2.1	1.00	42.00	24.00	133.3%
Bus-Bus-Bus-Rail	0.5	.6	1.05	44.10	26.10	145.0%
	<u>80.7</u>	<u>100.0%</u>				
Monthly Pass						
Adult	58.9					
Reduced	6.4					
Total Linked Trips	<u>333.1</u>					

*Estimated Monthly Expenditure
Cash Fare x 2 trips per day x 21 days per month.

CHICAGO TRANSIT AUTHORITY

NO TRANSFER FARE STRUCTURE

Comparison of Current Annual Ridership/Revenue to
Projections Assuming Shifts of Cash Paying Passengers

(In Millions)

60¢ Bus, 75¢ Rail \$40 Monthly Pass
--

Shift of Cash
Fare Paying Passengers
To Monthly Pass Based
on Economic
Advantage of Pass

	1982 Ridership/ <u>Fare Structure</u>	Projection* <u>1</u>	Projection* <u>2</u>
<u>Cash Fares</u>			
<u>Adult</u>			
# Linked Trips	187.1	151.8	125.7
\$ Revenue	\$178.8	\$138.7	\$105.3
<u>Reduced Fare</u>			
# Linked Trips	80.7	61.8	53.3
\$ Revenue	\$36.8	\$ 26.3	\$ 21.1
<u>Monthly Pass</u>			
<u>Adult</u>			
# Linked Trips	58.9	92.4	118.5
# Annual Purchases	1.1	2.0	2.7
\$ Revenue	\$45.3	\$ 80.5	\$106.6
<u>Reduced</u>			
# Linked Trips	6.4	24.9	33.4
# Annual Purchases	.1	.6	.8
\$ Revenue	<u>\$2.0</u>	<u>\$ 10.5</u>	<u>\$ 14.4</u>
<u>Total</u>			
# Linked Trips	333.1	330.9	330.9
\$ Revenue	<u>\$262.9</u>	<u>\$256.0</u>	<u>\$247.4</u>
Decrease from 1982 Revenue			
Amount	-	\$(6.9)	\$(15.5)
%	-	(2.6)%	(5.9)%

*See Page 15, Footnotes and Assumptions

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure

Schedule of Ridership Distribution
and Pass Benefit

60¢ Bus, 75¢ Rail

Category and Type of Rider	Linked Trips	% Current Cash Ridership	Cash Fare	*Estimated Monthly Expenditure	Economic Advantage of Pass	
					\$ Monthly Benefit	% Benefit
<u>Adult</u>						
Bus	48.8	26.1	\$.60	\$ 25.20	\$(14.80)	-
Rail	34.5	18.4	.75	31.50	(8.50)	-
Bus-Bus	28.0	15.0	1.20	50.40	10.40	26.0%
Bus-Rail	49.9	26.7	1.35	56.70	16.70	41.8%
Bus-Bus-Bus	7.4	4.0	1.80	75.60	35.60	89.0%
Bus-Bus-Rail	13.3	7.1	1.95	81.90	41.90	104.8%
Bus-Bus-Bus-Bus	1.9	1.0	2.40	100.80	60.80	132.0%
Bus-Bus-Bus-Rail	3.3	1.7	2.55	107.10	67.10	167.8%
	<u>187.1</u>	<u>100.0%</u>				
<u>Reduced</u>						
Bus	33.1	41.0	\$.30	\$ 12.60	\$(5.40)	-
Rail	4.1	5.1	.35	14.70	(3.30)	-
Bus-Bus	25.1	31.1	.60	25.20	7.20	40.0%
Bus-Rail	7.5	9.3	.65	27.30	9.30	51.7%
Bus-Bus-Bus	6.7	8.3	.90	37.80	19.80	110.0%
Bus-Bus-Rail	2.0	2.5	.95	39.90	21.90	121.7%
Bus-Bus-Bus-Bus	1.7	2.1	1.20	50.40	32.40	180.0%
Bus-Bus-Bus-Rail	0.5	.6	1.25	52.50	34.50	191.7%
	<u>80.7</u>	<u>100.0%</u>				
Monthly Pass						
Adult	58.9					
Reduced	<u>6.4</u>					
Total Linked Trips	<u>333.1</u>					

*Estimated Monthly Expenditure
Cash Fare x 2 trips per day x 21 days per month.

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure

FOOTNOTES AND ASSUMPTIONS

- A) Current data based on schedules prepared by Operations Planning. For purposes of consistency within this comparison, the linked trips for monthly passes sold in the Operations Planning models have been restated to 52 linked trips per pass sold.
- B) Shifting of passengers from cash to Monthly Pass is based on the attached "Schedule of Ridership Distribution and Pass Benefit."
(See pages 10, 12 and 14) However, no shifts were made for riders who will not experience a fare higher than that currently paid.
- In shifting cash riders to Monthly Pass, it was assumed that the new pass ridership would use the pass at 40 linked (originating) trips per pass sold.
- C) It was also assumed in both projections that a student fare Monthly Pass would be developed. This pass would enable student ridership (reduced fare) to shift from cash to Monthly Pass in the same manner as other reduced-fare ridership.

Projection 1

It is assumed that passengers will shift from cash to Monthly Pass at a rate of 1% benefit = 1% shift in cash passengers until the point of 60% benefit is reached. From 60% benefit on the shift will be 70%. However, in no case will the shift exceed 70% of cash fare passengers.

Projection 2

It is assumed that whenever discount exceed 20% there will be a 70% shift in cash passengers. The shift will not exceed 70%

- D) With the development of a bi-weekly pass, pass buyers will divide equally between monthly and bi-weekly purchases.

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure (In Millions)

Cost Savings

	<u>Annualized Amounts</u>	
	<u>At 180,000 Bills Daily</u>	<u>At 300,000 Bills Daily</u>
Bill Handling Costs	\$1.7	\$2.8
Farebox/Cashbox Costs	2.1	5.0
Transfer Printing and Distribution	<u>.7</u>	<u>.7</u>
	<u>\$4.5*</u>	<u>\$8.5</u>

*Chicago Police Department has been providing added security at vault islands at annual cost of approximately \$500,000 which is not included above.

Additional Revenue

Recovery Fare and Transfer Abuse

Estimated Range, 2% to 10% of Current Bus Cash Fares 3.2 to 16.0

Each 1% = \$1.6

Notes on Fare and Transfer Abuse

Operations Planning, in a memo dated 6-23-82, estimates transfer abuse at \$.3 - 2.5 annual loss.

Internal Audit, in a memo dated 8-2-82, estimates farebox shortage at \$2.0 - 4.6 annual loss.

Added Costs

Costs include printing, commission and distribution including additional CTA personnel in several departments to handle monthly and bi-weekly pass sales.

Estimated Range - each 100,000 increase in annual purchases =
\$100,000 additional expense \$1.8 to \$4.2

Commission costs are included at 1% of sale price.

Each additional 1% commission paid for each additional 100,000 passes sold will increase costs by approximately \$27,000.

Chicago Transit Authority
General Operations Division
Operations Planning Department
Routes/Systems Section

Chicago Transit Authority 01-232496

Typical weekday trips
(thousands), 1982 by
trip components

(rounded to nearest 5,000 riders)

<u>Type of Trip</u>	<u>Adult cash</u>	<u>Reduced cash</u>	<u>Monthly pass</u>	<u>Total</u>
Bus	165	110	60	335
Rail	115	15	35	165
Bus-Bus	95	85	45	225
Bus-Rail	160	25	65	250
Rail-Rail	10	-	5	15
Bus-Bus-Bus	25	20	10	55
Bus-Bus-Rail ...	40	5	15	60
Bus-Rail-Rail ..	-	-	-	-
Bus-Bus-Bus-Bus	5	5	-	10
Bus-Bus-Bus-Rail	<u>10</u>	<u>-</u>	<u>-</u>	<u>10</u>
TOTAL	<u>625</u>	<u>265</u>	<u>235</u>	<u>1,125</u>

(-) indicates less than 2,500 on a typical weekday

MBG/sj

CHICAGO TRANSIT AUTHORITY

PREPAID INCENTIVE FARE STRUCTURE

	<u>1982</u>	<u>1983</u>
Projection 1, No Price Elasticity		
Farebox Revenue Required (A)	\$262.9	\$267.1
Farebox Revenue Produced	<u>268.4</u>	<u>279.1</u>
Revenue Produced over (under) Revenue Required	\$ 5.5	\$ 12.0
Additional Savings, Revenues & Costs		
Cost Savings (B)	\$3.8 to \$ 7.8	\$3.8 to \$ 7.8
Additional Revenue (C)	1.6 to 8.0	1.6 to 8.0
Less Added Costs (D)	<u>(4.3) to (4.3)</u>	<u>(4.3) to (4.3)</u>
Total	\$1.1 to \$11.5	\$1.1 to \$11.5
Projection 2, Price Elasticity .23 of Cash Paying Passengers (E)		
Farebox Revenue Required (A)	\$262.9	\$267.1
Farebox Revenue Produced	<u>265.8</u>	<u>276.4</u>
Revenue Produced over (under) Revenue Required	\$ 2.9	\$ 9.3
Additional Savings, Revenues & Costs		
Cost Savings (B)	\$3.8 to \$ 7.8	\$3.8 to \$ 7.8
Additional Revenue (C)	1.6 to 8.0	1.6 to 8.0
Less Added Costs (D)	<u>(4.3) to (4.3)</u>	<u>(4.3) to (4.3)</u>
Total	\$1.1 to \$11.5	\$1.1 to \$11.5
Projection 3, Price Elasticity .23 of Cash Paying Passengers and 2% Loss of Prepaid Passengers (E)		
Farebox Revenue Required (A)	\$262.9	\$267.1
Farebox Revenue Produced	<u>263.0</u>	<u>273.5</u>
Revenue Produced over (under) Revenue Required	\$.1	\$ 6.4
Additional Savings, Revenues & Costs		
Cost Savings (B)	\$3.8 to \$ 7.8	\$3.8 to \$ 7.8
Additional Revenue (C)	1.6 to 8.0	1.6 to 8.0
Less Added Costs (D)	<u>(3.8) to (3.8)</u>	<u>(3.8) to (3.8)</u>
Total	\$1.6 to \$12.0	\$1.6 to \$12.0

(A) Actual for 1982

(B) Cost savings resulting from reduction of dollar bills

(C) Additional revenue attributable to reduction of transfer and fare abuse

(D) Cost increased monthly and/or bi-weekly pass sales.

(E) Each 1% increase in price equals a .23% decrease in passengers

} See Page 21

CHICAGO TRANSIT AUTHORITY
PREPAID INCENTIVE FARE STRUCTURE

Comparison of Current Annual Ridership to
Alternative Projections

	1982 Ridership/Fare Structure		Shift of cash fare paying passengers to prepaid fare based on economic advantage			
	Linked Trips	Revenue (Millions)	Projection 1 Linked Trips	Projection 2 Linked Trips	Projection 3 Linked Trips	Revenue

Cash Fares

Adult

With transfer

Without transfer

Totals

Reduced

With transfer

Without transfer

Totals

Monthly Pass

Adult

Annual purchases

Reduced

Annual purchases

Total

Change from 1982 Revenue

Amount

2

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

Footnotes and Assumptions

- *Current ridership data based on schedules prepared by Operations Planning, restated to include token usage - Monthly Passes have been restated to 52 Linked trips per pass sold.
- *Shifting of passengers from cash to prepayment is based on the attached schedule "Schedule of Ridership Distribution and Pass Token Benefit". It was assumed that 10% of cash passengers would not shift despite prepaid benefits.
- Projection 1 - Assumes no price elasticity
- Projection 2 - Assumes price elasticity of .23 for remaining cash passengers only
- Projection 3 - Assumes price elasticity of .23 for remaining cash passengers and a 2% loss of passengers shifting to prepayment

Prepaid Incentive Fare Structure
Schedule of Ridership Distribution and Pass/Token Benefit

	Linked Trips	% Current Cash/Token Ridership	Cash Fare	*Estimated Monthly Expenditure	Economic Advantage Pass/Token	
					Monthly Benefit Pass	% Benefit Token
<u>Adult</u>						(A)
Cash, with transfer	98.8	52.8	\$1.50	\$63.00	\$23.00	\$23.10
Cash, without transfer	61.1	32.7	1.40	58.60	18.80	23.10
Tokens	27.2	14.5	.85	35.70	(4.30)	-
	<u>187.1</u>	<u>100.0%</u>				
<u>Reduced</u>						
Cash, with transfer	42.6	52.8				
Cash, without transfer	33.5	41.5				
Tokens	4.6	5.7				
	<u>80.7</u>	<u>100.0%</u>				
<u>Monthly Pass</u>						
Adult	58.9					
Reduced	6.4					
Total Linked Trips	<u>333.1</u>					

-----Not Applicable-----

*Estimated Monthly Expenditure
Fare x 2 trips per day x 21 days per month

(A) Riders will elect pass for unlimited riding privileges

(B) Riders will elect tokens for greater monthly benefit

CHICAGO TRANSIT AUTHORITY

Prepaid Incentive Fare Structure (In Millions)

Cost Savings

	Annualized Amounts	
	At 180,000 Bills Daily	At 300,000 Bills Daily
Bill Handling Costs	\$1.7	\$2.8
Farebox/Cashbox Costs	<u>2.1</u>	<u>5.0</u>
	<u>\$3.8*</u>	<u>\$7.8</u>

*Chicago Police Department has been providing added security at vault islands at annual cost of approximately \$500,000 which is not included above.

Additional Revenue

Recovery Fare Abuse

Estimated Range, 1% to 5% of Current Bus Cash Fares 1.6 to 8.0
Each 1% = \$1.6

Notes on Fare Abuse

Internal Audit, in a memo dated 8-2-82, estimates farebox shortage at \$2.0 - 4.6 annual loss.

Added Costs

Costs include printing, commission and distribution including additional CTA personnel in several departments to handle monthly and bi-weekly pass sales.

Estimated Range, each 100,000 increase in annual purchases =
\$100,000 additional expense \$3.8 - \$4.3

Commission costs are included at 1% of sale price.
Each additional 1% commission paid for each additional 100,000 passes.
will increase costs by approximately \$27,000.

Chicago Transit Authority

September 30, 1982

To: Bernard J. Ford
From: Fare Collection Task Force
Re: Bus System Fare Box Equipment Recommendation

During the past two months, the fare collection task force members have conducted an extensive study of the bus revenue collection system problems and possible solutions. In summary, we are not ready to recommend any immediate long term solution or system. No immediate solution is recommended in that: 1) we do not have capital money available for purchase of new equipment; 2) the time necessary to implement a solution is several months away; 3 with the growing influx of dollar bills an immediate short term solution is needed and long over due.

In view of these items we recommend the following 2-step solution:

Step 1 - Short term recommendations:

- 1) Equip the four heaviest dollar bill problem generating garages with auxiliary piggyback dollar bill boxes. Three garages (69, 77 and North Ave.) would be equipped with CTA type piggybacks and one (Lawndale) with a bill acceptor type. (See OP-y82378 for detail of fare box jams and dollar bill volume by garages).

Continue the "Dollar bill ban" with increased advertising campaigns promoting the benefits and savings of the monthly pass and as well as discount tokens. Create new marketing campaigns to encourage purchase and use of monthly pass by enlisting the help of merchants and manufacturers with their promotion coupons.

- 2) Or as an alternative, recommend an immediate fare adjustment to one of the "No transfer" fare structures alternatives described in the Finance Division study attached. If this alternative is implemented immediately, the need for the auxiliary piggyback dollar bill box will not be required as in 1) above.

Step 2 - Long term recommendation, six months to one year:

- 1) Prepare a performance/technical specification for the purchase of new dollar bill accepting fare boxes. The minimum requirement of this equipment would be to display amount deposited to operator with option to expand to full registration and data capture in the future.
- 2) Apply for Federal grant money to purchase new fare boxes on bus systemwide basis over next three years.
- 3) Advertise for bids to purchase new fareboxes described in item 1 above.

The attached pages show in detail the costs and comparisons of the various systems studied, as well as the financial aspects over a ten year period with respect to fares and revenue.

Fare Collection Task Force

JPO'C:gi

Chicago Transit Authority

September 21, 1982

To: Fare Collection Task Force

From: Director, Passenger Controls/Graphics

Re: Piggyback purchase/installation cost - Four garages

As an initial step to alleviate fare box jamming and damage it is the recommendation of the Fare Collection Task Force that piggyback dollar bill fare boxes be purchased and installed at the following four major problems garages. Estimated cost is as following:

<u>Garage</u>	<u>No. of buses assigned</u>	<u>No. of CTA piggyback required - @\$64</u>	<u>Install brackets & modify hand rails @\$50</u>	<u>Locks @\$10</u>	<u>Est. total</u>
North	310#	110 = \$ 7,040	\$ 5,050	\$1,100	\$ 13,190
69th	233	233 = \$ 14,912	\$11,650	\$2,330	\$ 28,892
77th	351	<u>351 = \$ 22,464</u>	<u>\$17,550</u>	<u>\$3,510</u>	<u>\$ 43,524</u>
Subtotal		694 = \$ 44,416	\$34,250	\$6,940	\$ 85,606
Lawndale	129	150 Rowe @\$861.30 = \$129,195 (includes spares)	\$ 6,450	-	\$135,645
Total	1023	<u>844 = \$173,611</u>	<u>\$40,700</u>	<u>\$6,940</u>	<u>\$221,251</u>

- 200 buses at North Ave. have previously been equipped for CTA type piggyback boxes.

* - 1,200 Master locks are on hand to secure piggyback boxes to existing fare box. 200 needed for lids at North Ave.

JPO'C:gi

Cc: Task Force members

Chicago Transit Authority

General Operations Division
Operations Planning Department
Passenger Controls/Graphics

Farebox alternatives

OP-x82393

Install piggybacks at
four garages
(180,000 bills daily)

9-27-82

IMMEDIATE ACTION ALTERNATIVE

1) Capital expenditures

Money trucks:	\$ 50,000
Bill accepting equipment:	\$ 221,250

2) Annual maintenance CTA repairing cashboxes/ bill accepting devices

Material:	\$ 220,000
Manufacturer contract:	0
Farebox/cashbox labor:	343,200 (8)
Replace fareboxes:	15,000

3) Pulling Island Operation 10 full time locations plus 2 part time locations

Cashbox pullers:	\$3,116,400 (78.4)
Supervisors:	833,800 (18.8)
Money Truck operators:	371,700 (9.0)

4) Central Counting Bus revenue, bills only

Total Central Counting*	\$1,453,300
(includes bill handlers)	(273,000 (6)
Outside bill handling	1,175,000

5) Security (not CTA)

	\$ 625,250
--	------------

Capital expenditure	\$ 271,250
---------------------	------------

Annual expenditure	\$8,133,650
--------------------	-------------

This short term solution will cause a steady increase in bill use systemwide.

* comparative figure, excludes any new duties to be undertaken by C.C.

DAM:gi

Chicago Transit Authority
General Operations Division
Operations Planning Department
Passenger Controls/Graphics

Farebox alternatives

OP-x82401

Fare structure change to
basic fare 75c or less
(40,000 bills daily)

9-27-82

1) Capital expenditures

Money trucks:	0
Bill accepting equipment:	0

2) Annual maintenance CTA
repairing cashboxes/
bill accepting devices

Material:	100,000
Manufacturer contract:	50,000
Farebox/cashbox labor:	171,600 (4)
Replace fareboxes:	0

3) Pulling Island Operation
10 full time locations
plus 2 part time locations

Cashbox pullers	2,067,000 (52)
Supervisors:	0
Money Truck operators:	205,500 (4.8)

4) Central Counting
Bus revenue, bills only

Total Central Counting*	1,453,300
(includes bill handlers)	(273,000 (6)
Outside bill counting	0

5) Security (not CTA)

471,750

Capital expenditure	0
Annual expenditure	4,519,150

* comparative figure, excludes any new duties to be undertaken by C.C.

DAM:gi

Cost Effect of Dollar Bills	OP-782196
1980 thru 1983 comparisons with bill has remaining in effect	Rev. 9-24-82

(1) Figure includes dollar bill program consisting from \$60,000 bills in January, 1982 to 160,000 bills in August, 1982. Per budget increases the quantity of 1982 anticipated expenditures were budgeted for 160,000 dollar bills total; approved bills did not participate as envisioned on realization to date of dollar bills.

(2) \$40,000 remains of bills issued under Contract Q-48, will be charged to 1983 budget.

(3) Approved bills did not participate as envisioned in number of redacted meeting reports, currently at 175 a week.

(4) The figure includes percentage of second source contracts for carbon copies. As of August, 1982 \$249,000 in contracts have been released, the balance of the contract was estimated to be \$100,000. It is highly likely the rolling stock included approximately as high as \$400 and numerous stocking of components.

(5) Later years also number will decrease substantially. The additional 1990/1983 to a rough estimate of anticipated expenditure on the \$250,000 contract (\$1-198).

(6) Bill issues for carbon/carbon purchase/reprints.

(7) The increase to the money of far above what will be replaced in 1980/1983 so 1980 is assumed to be a direct cost of the bill program.

Chicago Transit Authority
General Operations Division
Operations Planning Department
Passenger Control/Graphics

Bus System
Service/Pass Box/
Revenue Analysis

09-782378

9-15-82

Service	Service Requirements (Passenger/Pass Box)				Periods Jan - 8 of polling				Additional only passenger required	Total Passengers Revenue				Revenue (1)				Average # of calls	
	No. of passenger		No. of pass. box		Jan - 8		Jan - 8			Total		Revenue		Revenue		Revenue			
	Bus	Pass	Bus	Pass	Bus	Pass	Bus	Pass		Bus	Pass	Bus	Pass	Bus	Pass	Bus	Pass		
Archer	270	240	87	61	307	100	67	116	0	1,1	80,663	17,278	97,941	13,565	26,6	11,664	33,1	8,395	66,9
Forest Ave	248	206	109	96	297	181	117	299	0	0	50,156	34,599	84,755	13,565	26,6	11,664	33,1	8,395	66,9
North Park	129	106	66	61	139	80	77	299	1,1	1,1	32,393	25,125	57,518	12,778	26,6	11,664	33,1	8,395	66,9
Franklin	127	124	56	59	104	96	41	92	0	0	30,105	16,890	47,000	6,395	21,1	5,875	34,6	2,395	34,6
South Park	310	255	172	136	338	203	133	394	1,1	2,8	78,895	64,957	143,852	30,092	20,4	31,107	48,5	9,632	20,9
Franklin (Franklin)	221 (133)	192 (148)	118 (99)	93 (61)	298 (193)	157 (101)	124 (81)	397	0	0	71,310	49,517	120,827	15,990	22,4	11,565	29,4	8,845	27,4
South	235	192	118	93	298	157	124	397	0	0	16,699	10,595	27,294	6,698	40,0	5,060	47,8	2,241	47,8
North	235	192	118	93	298	157	124	397	1,1	1,1	59,200	47,151	106,351	25,108	45,5	22,516	67,8	9,970	39,7
Franklin	221	192	118	93	298	157	124	397	2,8	2,8	32,393	25,125	57,518	12,778	26,6	11,664	33,1	8,395	66,9
Total fleet	1,904	1,607	793	596	1,949	1,249	930	6,615	1,1	9,8	407,099	357,261	764,360	166,513	20,0	101,873	135,3	845,017	21,3

Increase in service bus (per unit)		New increase from 8/1/50 to 9/1/50 7-8-51	
1952	1953	1952	1953
Archer	8-27-51	8-27-51	8-27-51
Forest Ave	10-25-51	10-25-51	10-25-51
North Park	1-10-51	1-10-51	1-10-51
Franklin	1-27-51	1-27-51	1-27-51
South Park	1-28-51	1-28-51	1-28-51
Franklin	2-2-51	2-2-51	2-2-51
South	2-6-51	2-6-51	2-6-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
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Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8-51
Franklin	2-8-51	2-8-51	2-8-51
South	2-8-51	2-8-51	2-8-51
North	2-8-51	2-8-51	2-8

Total of all fleet revenue was \$1,664,360

Total of all fleet revenue was \$1,664,360

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Chicago Transit Authority
General Operations Division
Operations Planning Department
Passenger Control/Office

Parabos alternatives

08-985366

1983 comparative
Capital and Annual expenditures

Rev. 9-27-82

by alternative at 300,000 bills daily

	Non-vandalizing fareboxes/devices				Vandalizing fareboxes/devices				New fareboxes				General Parabos Costs a bill
	Current farebox	CTA placebox	Bill slotter in open semistar	Bill slotter in locked semistar	Current farebox	CTA placebox	Bill slotter in open semistar	Bill slotter in locked semistar	Duncan Farecount	Duncan Farecount	Duncan Farecount	Duncan Farecount	
1) Capital expenditures													
Money trucks:													
Bill accepting equipment:	50,000	50,000	50,000	50,000					10,500,000	0	0	0	12,000,000
	0	685,000	2,820,000	2,820,000									
2) Annual maintenance CTA													
repairing cashboxes/													
bill accepting devices													
Material:	450,000	68,500	100,000	100,000									
Manufacturer contract:	50,000	50,000	382,000	382,000									
Parabos/cashbox labor:	943,800(22)	171,600(4)	557,700(13)	557,700(13)					1,050,000	0	0	0	1,200,000
Replace fareboxes:	50,000	0	0	0					1,587,300(37)	0	0	0	1,072,500(25)
3) Pulling Island Operation													
to replace the fareboxes													
plus 2 part time technicians													
Cashbox pullers:	3,800,000(96.1)	3,800,000(96.1)	2,820,000(96.1)	2,820,000(96.1)					2,067,000(52)	0	0	0	2,067,000(52)
Supervisors:	1,235,000(30.4)	1,235,000(30.4)	1,235,000(30.4)	1,235,000(30.4)					0	0	0	0	0
Money Truck operators:	489,500(10.4)	489,500(10.4)	489,500(10.4)	489,500(10.4)					205,500(4.8)	205,500(4.8)	205,500(4.8)	205,500(4.8)	205,500(4.8)
4) Central Counting													
Total Central Counting*	81,453,300	81,453,300	82,135,800	82,135,800					81,453,300	81,453,300	81,453,300	81,453,300	81,453,300
(includes bill handlers)	(273,000(6))	(273,000(6))	(955,500(21))	(955,500(21))					(273,000(6))	(273,000(6))	(273,000(6))	(273,000(6))	(273,000(6))
Outside bill counting	2,282,800	2,212,600	0	0					2,142,400	2,142,400	2,142,400	2,142,400	2,142,400
5) Security (not CTA)													
Capital expenditure	50,000	735,000	2,870,000	2,870,000					10,500,000	10,500,000	10,500,000	10,500,000	12,000,000
Annual expenditure	811,669,700	810,395,800	89,515,300	87,734,200					88,785,500	88,785,500	88,785,500	88,785,500	88,785,500

* Comparative figure, excludes any new duties to be undertaken by C.C.

Advantages

Non-registering fareboxes/devices		Advantages	
General Features		New Features	
Basic Alternatives		Basic Alternatives	
<p>1) Only capital cost is for the additional units (no labor or materials).</p> <p>2) Can be utilized as a short-term solution to meet the need for additional units.</p> <p>3) Low maintenance cost.</p> <p>4) Low maintenance cost.</p> <p>5) Reduce jammed coinboxes.</p>		<p>1) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>2) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>3) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>4) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>5) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p>	
Bill Alternatives		Bill Alternatives	
<p>1) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>2) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>3) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>4) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>5) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p>		<p>1) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>2) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>3) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>4) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>5) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p>	
Bill Alternatives		Bill Alternatives	
<p>1) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>2) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>3) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>4) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>5) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p>		<p>1) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>2) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>3) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>4) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>5) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p>	
Bill Alternatives		Bill Alternatives	
<p>1) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>2) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>3) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>4) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>5) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p>		<p>1) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>2) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>3) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>4) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p> <p>5) Inexpensive to purchase, required, non-reversible for use and then for the billie.</p>	

Disadvantages

Disadvantages		Disadvantages	
General Features		General Features	
<p>1) Very sensitive to purchase.</p> <p>2) Very sensitive to purchase.</p> <p>3) Very sensitive to purchase.</p> <p>4) Very sensitive to purchase.</p> <p>5) Very sensitive to purchase.</p>		<p>1) Very sensitive to purchase.</p> <p>2) Very sensitive to purchase.</p> <p>3) Very sensitive to purchase.</p> <p>4) Very sensitive to purchase.</p> <p>5) Very sensitive to purchase.</p>	
Bill Alternatives		Bill Alternatives	
<p>1) Very sensitive to purchase.</p> <p>2) Very sensitive to purchase.</p> <p>3) Very sensitive to purchase.</p> <p>4) Very sensitive to purchase.</p> <p>5) Very sensitive to purchase.</p>		<p>1) Very sensitive to purchase.</p> <p>2) Very sensitive to purchase.</p> <p>3) Very sensitive to purchase.</p> <p>4) Very sensitive to purchase.</p> <p>5) Very sensitive to purchase.</p>	
Bill Alternatives		Bill Alternatives	
<p>1) Very sensitive to purchase.</p> <p>2) Very sensitive to purchase.</p> <p>3) Very sensitive to purchase.</p> <p>4) Very sensitive to purchase.</p> <p>5) Very sensitive to purchase.</p>		<p>1) Very sensitive to purchase.</p> <p>2) Very sensitive to purchase.</p> <p>3) Very sensitive to purchase.</p> <p>4) Very sensitive to purchase.</p> <p>5) Very sensitive to purchase.</p>	
Bill Alternatives		Bill Alternatives	
<p>1) Very sensitive to purchase.</p> <p>2) Very sensitive to purchase.</p> <p>3) Very sensitive to purchase.</p> <p>4) Very sensitive to purchase.</p> <p>5) Very sensitive to purchase.</p>		<p>1) Very sensitive to purchase.</p> <p>2) Very sensitive to purchase.</p> <p>3) Very sensitive to purchase.</p> <p>4) Very sensitive to purchase.</p> <p>5) Very sensitive to purchase.</p>	

Chicago Transit Authority
General Operations Division
Operations Planning Department
Passenger Control Graphics

Peribus alternatives

09-78279

Rev. 9-14-82

Cost of counting bills,
bill handlers vs. bank costs
at 300,000 bills daily

Bill handler rate	300,000 bills daily (400,000 Mon.)		300,000 bills daily (400,000 Mon.)		300,000 bills daily (400,000 Mon.)	
	Per day (6 days/week)	Annual	Per day (6 days/week)	Annual	Per day (6 days/week)	Annual
1) Acceptance (no device) 4000 bills per man per day	Bills counted by 6 men	Bills sent to bank	Bill handler charges	Bank charges	Total cost	Total cost
	24,000	276,000 (70-34) 376,000 (No)	\$273,000	\$2,282,800	\$2,542,800	300,000 80 \$3,640,300
2) Acceptance (with piggyback) 5500 bills per man per day	33,000	267,000 (70-34) 367,000 (No)	\$273,000	\$2,212,600	\$2,472,600	300,000 59 \$2,686,500
3) Peribus/Verticals/UPV 7000 bills per man per day	42,000	258,000 (70-34) 358,000 (No)	\$273,000	\$2,142,400	\$2,402,400	300,000 46 \$2,093,000
4) Home/National Vendors 15,000 bills per man per day	90,000	210,000 (70-34) 310,000 (No)	\$273,000	\$1,768,000	\$2,038,000	300,000 21 \$ 955,500
5) Bill handlers using (Proposed) Duncan sort-a-buck machine 100,000 bills per man per machine per day	Bills counted by 4 men	Mo. of bills service charges - RTR based	Duncan's service charges			
	300,000	300,000	\$273,000	\$ 395,200	\$648,100	-

Notes:

- 1) Number of bills counted per bill handler per day per type of device from Manager, Treasury.
- 2) Bill handler wages based on \$13.00 hr a 1.9 x 2080 = \$26,920 annually x 1.2 factor for six days a week (\$45,500).
- 3) Bank charges based on \$25 charges per 1000 bills.
- 4) Annual Bank charges based on 300,000 bills per day, 5 times a week and 400,000 bills a day, one time a week.
- 5) Annual Bank charges = (Tues.-Sat., Number of bills x 1000 x \$25) + (Mon., Number of bills x 50 days x 1000 x \$25)
- 6) Duncan sort-a-buck is in design stage only. Duncan estimates 15,000 bills per machine per 2 man shift per day. GTA manpower based on 100,000 bills per machine per 2 man shift per day. Service charge will be 1.00¢ per bill. No Capital cost involved.

Can only be used in conjunction with new fabricator of bill stacking devices.

DWG:gs

CHICAGO TRANSIT AUTHORITY

Fare Structure Alternatives

The task force has examined two alternative fare structures which we feel will alleviate the current dollar bill situation. Attached are a series of three primary exhibits, and related supporting schedules, which show:

- EXHIBIT I - Using the current 10¢ transfer fare structure, and 3 plausible inflation scenarios, CTA fares in the near and intermediate future.
- EXHIBIT II - Using various rates of fare and a no-transfer fare structure (based upon a rail premium), the amount of farebox revenue expected in 1983.
- EXHIBIT III - Presents a prepaid incentive fare structure. This incorporates a logic similar to that used by commuter railroads, in which there is a heavy incentive offered to passengers for using prepaid fare methods. This incentive structure would alleviate farebox problems by minimizing the number of passengers paying cash fares.

The farebox revenues generated by these various alternatives are summarized in the report "Comparison of Alternative 1983 Projections of Farebox Revenue Produced." The primary exhibits and supporting schedules follow this summarization.

CHICAGO TRANSIT AUTHORITY

Fare Structure Alternatives
Comparison of Alternative 1983 Projections
Of Fare Box Revenue Produced

	<u>Best Case Projection</u>	<u>Worst Case Projection</u>
Revenue Required - Fiscal 1983 \$275.4		
<u>No-Transfer Fare Structure</u>		
50¢ Bus, 75¢ Rail - Farebox Revenue Produced	\$257.4	\$251.9
Cost Savings and Additional Revenue	<u>24.5</u>	<u>8.0</u>
TOTAL	\$281.9	\$259.9
(Shortfall) - Surplus from Required	\$6.5	\$(15.5)
50¢ Bus, 65¢ Rail - Farebox Revenue Produced	\$250.9	\$246.5
Cost Savings and Additional Revenue	<u>24.5</u>	<u>8.0</u>
TOTAL	\$275.4	\$254.5
(Shortfall) Surplus from Required	-	\$(20.9)
60¢ Bus, 75¢ Rail - Farebox Revenue Produced	\$267.0	\$258.0
Cost Savings and Additional Revenue	<u>24.5</u>	<u>8.0</u>
TOTAL	\$291.5	\$266.0
(Shortfall) - Surplus from Required	\$16.1	\$(9.4)
<u>Prepaid Incentive Fare Structure</u>		
Farebox Revenue Produced	\$279.1	\$273.5
Cost Savings and Additional Revenue	<u>15.8</u>	<u>5.7</u>
TOTAL	\$294.9	\$279.2
(Shortfall) Surplus from Required	\$19.5	\$3.8

CHICAGO TRANSIT AUTHORITY
4
Fare Structure Alternatives

EXHIBIT I - CURRENT FARE STRUCTURE

Projection of CTA Basic Fare Structure, 1983-1992,
under three different inflation assumptions.

Supporting Schedules

Operating Expenses and Revenue Required
(Ten-Year Projection)

Inflation Assumptions -

- 1 - 6% for 3 yrs., 5% for 3 yrs., 4% for 4 yrs.
- 2 - 8% for 2 yrs., 6% for 4 yrs., 4% for 4 yrs.
- 3 - 10% for 4 yrs., 8% for 3 yrs., 6% for 3 yrs.

EXHIBIT II - NO TRANSFER FARE STRUCTURE

Projection and comparison of 1983 Farebox Revenue
produced under three alternative no-transfer fare
structures.

Supporting Schedules

Fare Structures

- | | |
|--|-------------------|
| 1 - Revenue and Ridership | 50¢ Bus, 75¢ Rail |
| 1A - Monthly Pass Benefit | 50¢ Bus, 75¢ Rail |
| 2 - Revenue and Ridership | 50¢ Bus, 65¢ Rail |
| 2A - Monthly Pass Benefit | 50¢ Bus, 65¢ Rail |
| 3 - Revenue and Ridership | 60¢ Bus, 75¢ Rail |
| 3A - Monthly Pass Benefit | 60¢ Bus, 75¢ Rail |
| 4 - Footnotes and Assumptions used in the
preparation of Exhibit II,
Schedules 1, 2, and 3 | |
| 5 - Explanation of Cost Savings - Additional Revenue
Projections used in Exhibit II,
Schedules 1, 2, and 3 | |
| 6 - Operations Planning document detailing passenger
trip components (basis for various ridership
projections) | |

EXHIBIT III - PREPAID INCENTIVE FARE STRUCTURE

Comparison of 1983 Farebox Revenue produced under
three projections of Prepaid Incentive Fare Structures.

Supporting Schedules

- 1 - Comparison of Current Annual Ridership to
Alternative Projections
- 1A - Ridership Distribution and Pass/Token Benefit
- 2 - Explanation of Cost Saving and Additional Revenue

ADJUSTED FARES REQUIRED TO PRODUCE REVENUES
OF 50% OF OPERATING COST

CURRENT FARE STRUCTURE

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Assumption A (Inflation: 3 yrs. 6%; 3 yrs. 5%; 4 yrs. 4%)										
Farebox Revenue Required	275.4	297.3	309.2	320.5	332.8	345.4	356.0	372.0	378.5	390.6
Base Fare - Adult	.90	1.00	1.05	1.10	1.15	1.25	1.30	1.35	1.40	1.45
Base Fare - Reduced	.40	.45	.60	.65	.60	.65	.70	.75	.80	.85
Monthly Pass	40.00	45.00	47.50	50.00	52.50	55.00	57.50	60.00	62.50	65.00
Estimated Daily Bill Volume - Bus*	180,000	200,000	210,000	220,000	225,000	250,000	260,000	275,000	280,000	290,000
Assumption B (Inflation: 2 yrs. 8%; 4 yrs. 6%; 4 yrs. 4%)										
Farebox Revenue Required	279.5	305.3	317.4	331.4	346.5	362.2	373.4	390.2	397.1	409.7
Base Fare - Adult	.90	1.00	1.05	1.10	1.15	1.25	1.30	1.35	1.40	1.45
Base Fare - Reduced	.40	.45	.60	.65	.60	.65	.70	.75	.80	.85
Monthly Pass	40.00	45.00	47.50	50.00	52.50	57.50	60.00	62.50	65.00	67.50
Estimated Daily Bill Volume - Bus*	180,000	200,000	210,000	220,000	225,000	250,000	260,000	275,000	280,000	290,000
Assumption C (Inflation: 4 yrs. 10%; 3 yrs. 8%; 3 yrs. 6%)										
Farebox Revenue Required	281.8	313.0	335.2	360.3	382.6	405.5	432.5	459.5	475.7	499.3
Base Fare - Adult	.90	1.05	1.15	1.25	1.35	1.50	1.60	1.75	1.80	1.90
Base Fare - Reduced	.40	.60	.55	.60	.65	.75	.80	.85	.90	.95
Monthly Pass	40.00	47.50	52.50	57.50	62.50	67.50	72.50	77.50	80.00	85.00
Estimated Daily Bill Volume - Bus*	180,000	210,000	225,000	250,000	275,000	300,000	320,000	340,000	360,000	380,000

*Assuming a bill ban and a system-wide discounted token.

1983 - 1992

OPERATING EXPENSES AND REVENUE REQUIRED
AT 4.9% AVERAGE ANNUAL INFLATION (Assumption A)⁽¹⁾

	1982 ⁽²⁾	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Operating Expenses											
Labor	\$37.6	\$432.8	\$462.4	\$477.9	\$493.4	\$509.9	\$527.0	\$541.4	\$556.1	\$572.0	\$588.4
Material	41.9	46.4	48.3	51.2	53.7	56.4	59.2	61.6	64.0	66.6	69.3
Fuel	25.5	27.5	28.7	30.4	31.9	33.5	35.2	36.6	38.0	39.5	41.1
Power	15.5	18.5	19.5	20.7	21.7	22.8	23.9	24.9	25.9	26.9	28.0
Injuries and Damages	10.4	11.2	11.9	12.4	12.8	13.3	13.8	14.2	14.9	15.1	15.6
Other	33.2	35.9	37.3	39.5	41.5	43.6	45.8	47.6	49.5	51.5	53.5
Total Operating Expense	504.1	572.3	608.1	632.1	655.0	679.6	704.9	726.3	748.4	771.6	795.9
Public Funding											
50% of Operating Expense	252.0	286.1	304.0	316.0	327.5	339.7	352.4	363.1	379.2	385.8	397.9
System Generated Revenue Required	252.1	286.2	304.1	316.1	327.5	339.8	352.5	363.2	379.2	385.8	398.0
Farebox Revenue (at current fares) ⁽³⁾	275.4	275.3	272.8	275.5	278.3	281.0	283.8	286.7	289.5	292.4	295.4
Other Revenue	11.5	10.8	6.8	6.9	7.0	7.0	7.1	7.2	7.2	7.3	7.4
Additional Farebox Revenue Required	(34.8) ⁽⁴⁾	1.1	24.5	33.2	42.2	51.8	61.6	69.3	82.5	86.1	95.2
Total Farebox Revenue Required	\$240.6	\$275.4	\$297.3	\$309.2	\$320.5	\$332.8	\$345.4	\$356.0	\$372.0	\$378.5	\$390.6

(1) Assumes annual inflation rate of 6% for 3 yrs., 5% for 3 yrs., and 4% for 4 yrs.

(2) Budgeted for 1982

(3) Assumes 1% annual increase in ridership

(4) Excess over amount equal to 50% of operating costs

OPERATING EXPENSES AND REVENUE REQUIRED
AT 5.6% AVERAGE ANNUAL INFLATION (Assumption B) (1)

	1982 ⁽²⁾	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Operating Expenses											
Labor	\$377.6	\$438.0	\$473.7	\$489.8	\$509.2	\$529.9	\$551.6	\$567.0	\$593.4	\$599.7	\$617.0
Material	41.9	47.3	50.1	53.1	56.3	59.7	63.2	66.8	68.4	71.1	74.0
Fuel	25.5	28.1	29.7	31.5	33.4	35.4	37.6	39.1	40.6	42.2	43.9
Power	15.5	19.0	20.6	21.9	23.2	24.6	26.1	27.1	28.2	29.3	30.5
Injuries and Damages	10.4	11.4	12.3	12.7	13.3	13.9	14.5	15.0	16.7	15.9	16.5
Other	33.2	36.6	38.7	41.0	43.5	46.1	48.2	50.8	52.9	55.0	57.2
Total Operating Expense	504.1	580.4	626.1	660.0	678.9	709.6	741.9	764.8	799.2	813.2	839.1
Public funding											
50% of Operating Expense	252.0	290.2	312.6	325.0	339.5	354.8	371.0	382.4	399.6	406.6	419.6
System Generated Revenue Required	252.1	290.2	312.6	325.0	339.4	354.8	370.9	382.4	399.6	406.6	419.5
Farebox Revenue (at current fares) ⁽³⁾	276.4	276.3	272.8	276.5	278.3	281.0	283.8	286.7	289.5	292.4	295.4
Other Revenue	11.6	10.7	7.2	7.6	8.0	8.3	8.7	9.0	9.4	9.5	9.8
Additional Farebox Revenue Required	(34.8)⁽⁴⁾	4.2	32.5	41.9	53.1	65.5	78.4	96.7	100.7	104.7	114.3
Total Farebox Revenue Required	\$240.6	\$279.5	\$305.3	\$317.4	\$331.4	\$346.5	\$362.2	\$373.4	\$390.2	\$397.1	\$409.7

(1) Assumes annual inflation rate of 8% for 2 yrs., 6% for 4 yrs., and 4% for 4 yrs.

(2) Budgeted for 1982

(3) Assumes 1% annual increase in ridership

(4) Excess over amount equal to 50% of operating costs

1983 - 1992

**OPERATING EXPENSES AND REVENUE REQUIRED
AT 8.2% AVERAGE ANNUAL INFLATION (Assumption C) (1)**

	1982 ⁽²⁾	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Operating Expenses											
Labor	\$377.6	\$442.9	\$484.1	\$514.2	\$548.9	\$579.6	\$612.7	\$648.4	\$689.5	\$708.2	\$740.6
Material	41.9	47.2	52.0	57.2	62.9	67.9	73.3	79.2	84.0	89.0	94.3
Fuel	25.5	28.1	30.9	33.9	37.3	40.3	43.5	47.0	49.9	52.8	56.0
Power	15.5	18.9	21.6	23.8	26.2	28.3	30.5	33.0	34.9	37.0	39.3
Injuries and Damages	10.4	11.5	12.6	13.5	14.5	15.4	16.3	17.4	18.5	19.1	20.1
Other	32.2	36.5	40.2	44.2	48.6	52.8	56.7	61.2	64.3	68.8	72.2
Total Operating Expense	504.1	585.1	641.4	686.8	738.4	784.0	833.0	886.2	941.7	974.9	1,023.2
Public Funding											
50% of Operating Expense	252.0	292.5	320.7	343.4	369.2	392.0	416.5	443.1	470.9	487.5	511.6
System Generated Revenue Required	252.1	292.6	320.7	343.4	369.2	392.0	416.5	443.1	470.8	487.4	511.6
Farebox Revenue (at current fares) ⁽³⁾	275.4	275.3	272.8	276.6	278.3	281.0	283.8	286.7	289.5	292.4	295.4
Other Revenue	11.5	10.8	7.7	8.2	8.9	9.4	10.0	10.6	11.3	11.7	12.3
Additional Farebox Revenue Required	134.8 ⁽⁴⁾	6.5	40.2	59.7	82.0	101.6	122.7	145.8	170.0	183.3	203.2
Total Farebox Revenue Required	\$240.6	\$281.8	\$313.0	\$336.2	\$360.3	\$382.6	\$406.5	\$432.5	\$459.5	\$475.7	\$499.1

(1) Assumes annual inflation rate of 10% for 4 yrs., 8% for 3 yrs., and 6% for 3 yrs.

(2) Budgeted for 1982

(3) Assumes 1% annual increase in ridership

(4) Excess over amount equal to 50% of operating costs

CHICAGO TRANSIT AUTHORITY

EXHIBIT II

NO TRANSFER FARE STRUCTURE

	1982		1983 (E)	
	Projection* #1	Projection* #2	Projection* #1	Projection* #2
E - 50¢ Bus, 75¢ Rail See Schedule 1				
Farebox Revenue Required (A)	\$263.1	\$263.1	\$275.4	\$275.4
Farebox Revenue Produced	<u>246.8</u>	<u>241.5</u>	<u>257.4</u>	<u>251.9</u>
Difference - Shortfall (D)	\$ 16.3	\$ 21.6	\$ 18.0	\$ 23.5
Cost Savings & Additional Revenues				
Cost Savings (B)	\$4.8	to \$ 8.5	\$4.8	to \$ 8.5
Additional Revenue (C)	<u>3.2</u>	to <u>16.0</u>	<u>3.2</u>	to <u>16.0</u>
Total	<u>\$8.0</u>	to <u>\$24.5</u>	<u>\$8.0</u>	to <u>\$24.5</u>
E - 50¢ Bus, 65¢ Rail See Schedule 2				
Farebox Revenue Required	\$263.1	\$263.1	\$275.4	\$275.4
Farebox Revenue Produced	<u>240.6</u>	<u>236.3</u>	<u>250.9</u>	<u>246.5</u>
Difference - Shortfall (D)	\$ 22.5	\$ 26.8	\$ 24.5	\$ 28.9
Cost Savings & Additional Revenues				
Cost Savings (B)	\$4.8	to \$ 8.5	\$4.8	to \$ 8.5
Additional Revenue (C)	<u>3.2</u>	to <u>16.0</u>	<u>3.2</u>	to <u>16.0</u>
Total	<u>\$8.0</u>	to <u>\$24.5</u>	<u>\$8.0</u>	to <u>\$24.5</u>
RE - 60¢ Bus, 75¢ Rail See Schedule 3				
Farebox Revenue Required	\$263.1	\$263.1	\$275.4	\$275.4
Farebox Revenue Produced	<u>256.0</u>	<u>247.4</u>	<u>267.0</u>	<u>258.0</u>
Difference - Shortfall (D)	\$ 7.1	\$ 15.7	\$ 8.4	\$ 17.4
Cost Savings & Additional Revenues				
Cost Savings (B)	\$4.8	to \$ 8.5	\$4.8	to \$ 8.5
Additional Revenue (C)	<u>3.2</u>	to <u>16.0</u>	<u>3.2</u>	to <u>16.0</u>
Total	<u>\$8.0</u>	to <u>\$24.5</u>	<u>\$8.0</u>	to <u>\$24.5</u>

*See Exhibit II, Schedule 4, for Footnotes and Assumptions used as a basis for these projections.

- | | | |
|--|---|--|
| <p>A) Expected for 1982</p> <p>B) Cost savings resulting from reduction of dollar bills</p> <p>C) Additional revenue attributable to reduction of transfer and fare abuse</p> <p>D) Shortfall is the difference between revenue required and revenue produced.</p> <p>E) Farebox Revenue Produced for 1983 is based upon 1982 assumptions plus 4.3% which covers an extra week in CTA fiscal 1983 and increased ridership resulting from O'Hare Extension.</p> | } | <p>See Exhibit II, Schedule 5,
Cost Savings and Additional
Revenue</p> |
|--|---|--|

CHICAGO TRANSIT AUTHORITY
NO TRANSFER FARE STRUCTURE

EXHIBIT II
Schedule 1

Comparison of Current Annual Ridership/Revenue to
Projections Assuming Shifts of Cash Paying Passengers

(In Millions)

50¢ Bus, 75¢ Rail

	Current Ridership/ Current Fare Structure	Shift of Cash Fare Paying Passengers To Monthly Pass Based on Economic Advantage of Pass Projection* 1	Projection* 2
<u>Cash Fares</u>			
<u>Adult</u>			
# Linked Trips	187.1	169.3	149.4
\$ Revenue	\$178.8	\$142.6	\$117.6
<u>Reduced Fare</u>			
# Linked Trips	80.7	75.0	72.8
\$ Revenue	\$36.8	\$28.6	\$27.4
<u>Monthly Pass</u>			
<u>Adult</u>			
# Linked Trips	58.9	81.3	101.2
# Annual Purchases	1.1	1.7	2.2
\$ Revenue	\$45.3	\$69.4	\$89.3
<u>Reduced</u>			
# Linked Trips	6.4	15.0	17.2
# Annual Purchases	.1	.3	.4
\$ Revenue	<u>\$2.2</u>	<u>\$6.2</u>	<u>\$7.2</u>
<u>Total</u>			
# Linked Trips	333.1	340.6	340.6
\$ Revenue	<u>\$263.1</u>	<u>\$246.8</u>	<u>\$241.5</u>
Decrease from Current Revenue			
Amount	-	\$(16.3)	\$(21.6)
%	-	(6.2)%	(8.2)%

*See Exhibit II, Schedule 4, Footnotes and Assumptions

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure

Schedule of Ridership Distribution
and Pass Benefit

50¢ Bus, 75¢ Rail

Category and Type of Rider	Linked Trips	% Current Cash Ridership	Cash Fare	*Estimated Monthly Expenditure	Economic Advantage of Pass	
					\$ Monthly Benefit	% Benefit
Adult						
Bus	48.8	26.1	\$.50	\$21.00	\$ (19.00)	-
Rail	34.5	18.4	.75	31.50	{ 8.50 }	-
Bus-Bus	28.0	16.9	1.00	42.00	2.00	5.0%
Bus-Rail	49.9	26.7	1.25	82.60	12.50	31.3%
Bus-Bus-Bus	7.4	4.0	1.50	63.00	23.00	87.8%
Bus-Bus-Rail	13.3	7.1	1.75	73.50	33.50	83.8%
Bus-Bus-Bus-Bus	1.9	1.0	2.00	44.00	44.00	110.0%
Bus-Bus-Bus-Rail	9.3	1.7	2.25	94.50	64.50	136.3%
	<u>187.1</u>	<u>100.0%</u>				
Reduced						
Bus	33.1	41.0	\$.25	\$10.50	\$ (7.50)	-
Rail	4.1	6.1	.35	14.70	{ 3.30 }	-
Bus-Bus	25.1	31.1	.60	21.00	3.00	16.7%
Bus-Rail	7.5	9.3	.60	28.20	7.20	40.0%
Bus-Bus-Bus	6.7	8.3	.75	31.60	14.50	76.0%
Bus-Bus-Rail	2.0	2.6	.85	36.70	17.70	98.3%
Bus-Bus-Bus-Bus	1.7	2.1	1.00	42.00	24.00	133.3%
Bus-bus-Bus-Rail	0.5	.6	1.10	46.20	28.20	166.7%
	<u>80.7</u>	<u>100.0%</u>				
Monthly Pass						
Adult	68.9					
Reduced	6.4					
Total Linked Trips	<u>333.1</u>					

*Estimated Monthly Expenditure
Cash Fare x 2 trips per day x 21 days per month.

CHICAGO TRANSIT AUTHORITY

EXHIBIT II
Schedule 2

NO TRANSFER FARE STRUCTURE

Comparison of Current Annual Ridership/Revenue to
Projections Assuming Shifts of Cash Paying Passengers

(In Millions)

50¢ Bus, 65¢ Rail

		Shift of Cash Fare Paying Passengers To Monthly Pass Based on Economic Advantage of Pass	
	Current Ridership/ Current Fare Structure	Projection* 1	Projection* 2
<u>Cash Fares</u>			
<u>Adult</u>			
# Linked Trips	187.1	175.0	149.9
\$ Revenue	\$178.8	\$141.3	\$112.3
<u>Reduced Fare</u>			
# Linked Trips	80.7	72.1	69.1
\$ Revenue	\$36.8	\$26.9	\$25.2
<u>Monthly Pass</u>			
<u>Adult</u>			
# Linked Trips	58.9	76.8	101.9
# Annual Purchases	1.1	1.6	2.3
\$ Revenue	\$45.3	\$64.9	\$90.0
<u>Reduced</u>			
# Linked Trips	6.4	18.1	21.1
# Annual Purchases	.1	.4	.5
\$ Revenue	<u>\$2.2</u>	<u>\$7.5</u>	<u>\$8.8</u>
<u>Total</u>			
# Linked Trips	333.1	342.0	342.0
\$ Revenue	<u>\$263.1</u>	<u>\$240.6</u>	<u>\$236.3</u>
Decrease from Current Revenue			
Amount	-	\$(22.5)	\$(26.8)
%	-	(8.6)%	(10.2)%

*See Exhibit II, Schedule 4, Footnotes and Assumptions

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure

Schedule of Ridership Distribution
and Pass Benefit

50¢ Bus, 65¢ Rail

Category and Type of Rider	Linked Trips	% Current Cash Ridership	Cash Fare	Estimated Monthly Expenditure	Economic Advantage of Pass	
					\$ Monthly Benefit	% Benefit
Adult	48.8	26.1	\$.50	\$21.00	\$ (19.00)	-
Bus	18.4	18.4	.65	27.30	(12.70)	-
Rail	34.5	15.0	1.00	42.00	2.00	5.0%
Bus-Bus	28.0	15.0	1.15	48.30	8.30	20.8%
Bus-Rail	49.9	26.7	1.50	63.00	23.00	57.5%
Bus-Bus-Bus	7.4	4.0	1.50	69.30	29.30	73.3%
Bus-Bus-Rail	13.3	7.1	1.65	84.00	44.00	110.0%
Bus-Bus-Bus-Bus	1.9	1.0	2.00	90.30	50.30	126.0%
Bus-Bus-Bus-Rail	3.3	1.7	2.15	90.30	50.30	126.0%
	<u>187.1</u>	<u>100.0%</u>				
Reduced	33.1	41.0	\$.25	\$10.50	\$ (7.50)	-
us	4.1	5.1	.30	12.60	(6.40)	-
Rail	25.1	31.1	.50	21.00	3.00	16.7%
Bus-Bus	7.5	9.3	.65	23.10	6.10	28.3%
Bus-Rail	6.7	8.3	.75	31.50	13.50	78.0%
Bus-Bus-Bus	2.0	2.6	.80	33.60	15.60	86.7%
Bus-Bus-Rail	1.7	2.1	1.00	42.00	24.00	133.3%
Bus-Bus-Bus-Bus	0.5	.6	1.05	44.10	26.10	146.0%
Bus-Bus-Bus-Rail	<u>80.7</u>	<u>100.0%</u>				
Monthly Pass	58.9					
Adult	6.4					
Reduced	<u>33.1</u>					
Total Linked Trips						

*Estimated Monthly Expenditure
Cash Fare at 2 trips per day at 21 days per month.

CHICAGO TRANSIT AUTHORITY
NO TRANSFER FARE STRUCTURE

EXHIBIT II
Schedule 3

Comparison of Current Annual Ridership/Revenue to
Projections Assuming Shifts of Cash Paying Passengers

(In Millions)

60¢ Bus, 75¢ Rail

Shift of Cash
Fare Paying Passengers
To Monthly Pass Based
on Economic
Advantage of Pass

	Current Ridership/ Current Fare Structure	Projection* 1	Projection* 2
<u>Cash Fares</u>			
<u>Adult</u>			
Linked Trips	187.1	151.8	125.7
\$ Revenue	\$178.8	\$138.7	\$105.3
<u>Reduced Fare</u>			
# Linked Trips	80.7	61.8	53.3
\$ Revenue	\$36.8	\$ 26.3	\$ 21.1
<u>Monthly Pass</u>			
<u>Adult</u>			
# Linked Trips	58.9	92.4	118.5
# Annual Purchases	1.1	1.7	2.2
\$ Revenue	\$45.3	\$ 80.5	\$106.6
<u>Reduced</u>			
# Linked Trips	6.4	24.9	33.4
# Annual Purchases	.1	.3	.4
\$ Revenue	<u>\$2.2</u>	<u>\$ 10.5</u>	<u>\$ 14.4</u>
<u>Total</u>			
# Linked Trips	333.1	330.9	330.9
\$ Revenue	\$263.1	\$256.0	\$247.4
Decrease from Current Revenue			
Amount	-	\$(7.1)	\$(15.7)
%	-	(2.7)%	(6.0)%

*See Exhibit II, Schedule 4, Footnotes and Assumptions

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure

Schedule of Ridership Distribution
and Pass Benefit

604 Bus, 764 Rail

Category and Type of Rider	Linked Trips	% Current Cash Ridership	Cash Fare	Estimated Monthly Expenditure	Economic Advantage of Pass % Monthly Benefit	\$ Benefit
Adult Bus	48.8	26.1	\$.60	\$ 26.20	\$(14.80)	-
Bus-Rail	34.5	18.4	.76	31.90	(8.50)	-
Bus-Bus	28.0	15.0	1.20	50.40	10.40	28.05
Bus-Rail	49.9	26.7	1.35	56.70	16.70	41.85
Bus-Bus-Bus	7.4	4.0	1.80	76.60	35.60	89.05
Bus-Bus-Rail	13.3	7.1	1.95	81.90	41.90	104.85
Bus-Bus-Bus-Bus	1.9	1.0	2.40	100.80	60.80	152.05
Bus-Bus-Bus-Rail	3.3	1.7	2.55	107.10	67.10	167.85
	<u>187.1</u>	<u>100.0%</u>				
Reduced Bus	33.1	41.0	\$.30	\$ 12.60	\$(5.40)	-
Bus-Rail	4.1	5.1	.35	14.70	3.20	-
Bus-Bus	25.1	31.1	.60	25.20	7.20	40.05
Bus-Rail	7.5	9.3	.65	27.30	9.30	61.75
Bus-Bus-Bus	6.7	8.3	.90	37.80	19.80	110.05
Bus-Bus-Rail	2.0	2.5	.95	39.90	21.90	121.75
Bus-Bus-Bus-Bus	1.7	2.1	1.20	50.40	32.40	160.05
Bus-Bus-Bus-Rail	0.5	.6	1.25	62.60	34.50	191.75
	<u>80.7</u>	<u>100.0%</u>				
Monthly Pass Adult	58.9					
Reduced	6.4					
Total Linked Trips	<u>333.1</u>					

Accounting & Analysis
9-23-82Estimated Monthly Expenditure
Cash Fare x 2 trips per day x 21 days per month.

CHICAGO TRANSIT AUTHORITY
No Transfer Fare Structure

FOOTNOTES AND ASSUMPTIONS

- A) Current data based on schedules prepared by Operations Planning. For purposes of consistency within this comparison, the linked trips for monthly passes sold in the Operations Planning models have been restated to 52 linked trips per pass sold.
- B) Shifting of passengers from cash to Monthly Pass is based on the attached "Schedule of Ridership Distribution and Pass Benefit." (see Exhibit II, Schedules 1A, 2A, 3A). However, no shifts were made for riders who will not experience a fare higher than that currently paid.
- In shifting cash riders to Monthly Pass, it was assumed that the new pass ridership would use the pass at 40 linked (originating) trips per pass sold.
- C) It was also assumed in both projections that a student-fare Monthly Pass would be developed. This pass would enable student ridership (reduced fare) to shift from cash to Monthly Pass in the same manner as other reduced-fare ridership.

Projection 1

It is assumed that passengers will shift from cash to Monthly Pass at a rate of 1% benefit = 1% shift in cash passengers until the point of 60% benefit is reached. From 60% benefit on the shift will be 70%. However, in no case will the shift exceed 70% of cash fare passengers.

Projection 2

It is assumed that whenever discount exceeds 20% there will be a 70% shift in cash passengers. The shift will not exceed 70%.

CHICAGO TRANSIT AUTHORITY

No Transfer Fare Structure
(In Millions)

Cost Savings

	<u>Annualized Amounts</u>	
	<u>At 180,000 Bills Daily</u>	<u>At 300,000 Bills Daily</u>
Bill Handling Costs	\$1.7	\$2.8
Farebox/Cashbox Costs	2.4	5.0
Transfer Printing and Distribution	<u>.7</u>	<u>.7</u>
	<u>\$4.8</u>	<u>\$8.5</u>

Additional Revenue

Recovery Fare and Transfer Abuse
Estimated Range, 2% to 10% of Current Bus Cash Fares 3.2 to 16.0
Each 1% = \$1.6

Notes on Fare and Transfer Abuse

Operations Planning, in a memo dated 6-23-82, estimates transfer abuse at \$.3 - 2.5 annual loss.

Internal Audit, in a memo dated 8-2-82, estimates farebox shortage at \$2.0 - 4.6 annual loss.

VW:jaw
Accounting & Analysis
9-23-82

Chicago Transit Authority
General Operations Division
Operations Planning Department
Routes/Systems Section

Chicago Transit Authority

EXHIBIT II
Schedule 6
OP-x82299

Typical weekday trips
(thousands), 1982 by
trip components

(rounded to nearest 5,000 riders)

Type of Trip	Adult cash	Reduced cash	Monthly pass	Total
Bus	165	110	60	335
Rail	115	15	35	165
Bus-Bus	95	85	45	225
Bus-Rail	160	25	65	250
Rail-Rail	10	-	5	15
Bus-Bus-Bus	25	20	10	55
Bus-Bus-Rail ...	40	5	15	60
Bus-Rail-Rail ..	-	-	-	-
Bus-Bus-Bus-Bus	5	5	-	10
Bus-Bus-Bus-Rail	10	-	-	10
TOTAL	<u>625</u>	<u>265</u>	<u>235</u>	<u>1,125</u>

(-) indicates less than 2,500 on a typical weekday

MBG/cj

PREPAID INCENTIVE FARE STRUCTURE

	<u>1982</u>	<u>1983</u>
Projection 1, No Price Elasticity		
Farebox Revenue Required (A)	\$263.1	\$275.4
Farebox Revenue Produced	<u>268.4</u>	<u>279.1</u>
Revenue Produced over (under) Revenue Required	\$ 5.3	\$ 3.7
Cost Savings & Additional Revenues		
Cost Savings (B)	\$4.1 to \$ 7.8	\$4.1 to \$ 7.8
Additional Revenue (C)	<u>1.6 to 8.0</u>	<u>1.6 to 8.0</u>
Total	<u>\$5.7 to \$15.8</u>	<u>\$5.7 to \$15.8</u>
Projection 2, Price Elasticity .23 of Cash Paying Passengers (D)		
Farebox Revenue Required (A)	\$263.1	\$275.4
Farebox Revenue Produced	<u>265.8</u>	<u>276.4</u>
Revenue Produced over (under) Revenue Required	\$ 2.7	\$ 1.0
Cost Savings & Additional Revenues		
Cost Savings (B)	\$4.1 to \$ 7.8	\$4.1 to \$ 7.8
Additional Revenue (C)	<u>1.6 to 8.0</u>	<u>1.6 to 8.0</u>
Total	<u>\$5.7 to \$15.8</u>	<u>\$5.7 to \$15.8</u>
Projection 3, Price Elasticity .23 of Cash Paying Passengers and 2% Loss of Prepaid Passengers (D)		
Farebox Revenue Required (A)	\$263.1	\$275.4
Farebox Revenue Produced	<u>263.0</u>	<u>273.5</u>
Revenue Produced over (under) Revenue Required	\$ (.1)	\$ (1.9)
Cost Savings & Additional Revenues		
Cost Savings (B)	\$4.1 to \$ 7.8	\$4.1 to \$ 7.8
Additional Revenue (C)	<u>1.6 to 8.0</u>	<u>1.6 to 8.0</u>
Total	<u>\$5.7 to \$15.8</u>	<u>\$5.7 to \$15.8</u>

(A) Expected for 1982

(B) Cost savings resulting from reduction of
dollar bills(C) Additional revenue attributable to reduction
of transfer and fare abuse

(D) Each 1% increase in price equals a .23% decrease in passengers

See Exhibit III,
Schedule 2

Comparison of Current Annual Ridership to
Alternative Projections

Current Ridership/fare Structure		Shift of cash fare paying passengers to prepaid fare based on economic advantage					
		Projection 1	Projection 2	Projection 3	Projection 1	Projection 2	Projection 3
Cash Fare	Amount	Linked Trips	Revenue	Linked Trips	Revenue	Linked Trips	Revenue
		(Millions)					
With transfer	98.8	98.8	98.8	9.9	14.9	0.0	0.0
Without transfer	51.1	51.1	51.1	6.1	8.5	6.4	7.6
Tokens	167.4	167.4	167.4	82.2	71.8	81.1	70.8
				98.2	95.2	85.3	91.6
Reduced							
With transfer	42.6	42.6	21.3	42.6	21.3	42.6	21.3
Without transfer	33.5	33.5	13.4	33.5	13.4	33.5	13.4
Tokens	4.6	4.6	2.1	4.6	2.1	4.6	2.1
	80.7	80.7	36.8	80.7	35.8	80.7	35.8
Monthly Pass							
Amount	58.9	147.8	134.2	147.8	134.2	146.0	132.4
Annual purchases	1,132,500	3,385,000	3,385,000			3,100,000	
Reduced							
Annual purchases	6.4	6.4	2.2	6.4	2.2	6.4	2.2
	122,222	122,222		122,222		122,222	
Total	333.1	333.1	268.4	333.1	268.4	328.4	263.0
Change from Current Revenue							
Amount			6.3		2.7		(.1)
%			2.0%		1.0%		-

Footnotes and Assumptions

- *Current ridership data based on schedules prepared by Operations Planning, restated to include token usage - Monthly Passes have been restated to 52 linked trips per pass sold.
- Shifting of passengers from cash to prepaid is based on the attached schedule "Schedule of Ridership Distribution and Pass/Token Benefit." It was assumed that 10% of cash passengers would not shift despite prepaid benefits.
- Projection 1 - Assumes no price elasticity
- Projection 2 - Assumes price elasticity of .23 for remaining cash passengers only
- Projection 3 - Assumes price elasticity of .23 for remaining cash passengers and a 2% loss of passengers shifting to prepaid

Sch	Prepaid Incentive of Ridership District	re Structure in and Pass/Token	611				
				Estimated Monthly Expenditure	Economic Advantage Monthly Benefit Pass/Token	Pass/Token	% Benefit
Adult	Cash, with transfer	98.8		\$63.00	\$23.00	\$23.10	57.5 (A)
	Cash, without transfer	61.1		58.80	18.80	23.10	64.7 (B)
	Tokens	21.2		.85	(4.30)		
		<u>181.1</u>		<u>122.65</u>			
Reduced Adult	Cash, with transfer	42.6		52.8			
	Cash, without transfer	33.5		41.5			
	Tokens	4.6		5.7			
		<u>80.7</u>		<u>100.03</u>			
-----Not Applicable-----							

CHICAGO TRANSIT AUTHORITY

Prepaid Incentive Fare Structure
(In Millions)

Cost Savings

	<u>Annualized Amounts</u>	
	<u>At 180,000 Bills Daily</u>	<u>At 300,000 Bills Daily</u>
Bill Handling Costs	\$1.7	\$2.8
Farebox/Cashbox Costs	<u>2.4</u>	<u>5.0</u>
	<u>\$4.1</u>	<u>\$7.8</u>

Additional Revenue

Recovery Fare Abuse

Estimated Range, 1% to 5% of Current Bus Cash Fares 1.5 to 8.0
Each 1% = \$1.6

Notes on Fare Abuse

Internal Audit, in a memo dated 8-2-82, estimates farebox shortage
at \$2.0 - 4.6 annual loss.

VW:jaw
Accounting & Analysis
9-24-82

PASS COMMISSION SURVEY

PASS COMMISSION SURVEY

HARRIS BANK

Jack Ronchetto 461-2109

Not interested in selling passes regardless of commission.

TALMAN HOME

G. Brent Minor 922-9600

Letter to us demanding commission.
Feels 50¢ minimum to 75¢ to cover costs.

Discussed the 1% rate and he does not feel that he can cover administrative costs with this figure. Talman-Home now has 55 locations within Chicago. Would make both passes available if commission level covers administrative costs. Would like an answer by the end of next week, end of month to work up costs. Also, mentioned that float is attractive to them and will consider this in savings to bank.

BROADWAY BANK

Telo Jalleor 989-2100

CRAGIN FEDEPAL

Don Holton, Marketing Manager 889-1000

Is interested in selling monthly and bi-weekly, but must receive a commission to do so. Feels that 1% is good and will sell for this amount but would prefer 2 to 2½%.

LAKEVIEW

Robert Rybka 525-2180

Is interested in selling monthly and bi-weekly, a 1% commission rate is acceptable. They are willing to go along with majority rule on commission rate. Recommended that we utilize bank names in advertising in other spots beside sales location brochures -- car cards?

BANK OF RAVENSWOOD

Bernadette Tagle, Collection Department 989-3146

Is interested in selling both monthly and bi-weekly and a 1% commission level is acceptable.

CURRENCY EXCHANGE ASSOCIATION

Emmet McMarrow 733-1410

If passes were to be offered, he feels that they will take one type or the other. Will not offer both passes due to confusion at selling window. Commission not yet known.

FIRST NATIONAL BANK OF CHICAGO

Andrew Neilo 732-6246

Not interested in selling passes regardless of commission payment.

CONTINENTAL ILLINOIS BANK

Art Theriault 828-2345

Not interested in selling passes regardless of commission.

OAK TRUST AND SAVINGS

Muriel Haygood 440-4018

Would be interested in selling monthly passes only and a 1% commission is acceptable. Facility currently sells out and does not reorder by 1st of month. If commission is part of program will order enough passes to sell for entire sales period.

LINCOLN SQUARE

George Dimakos, Regional Manager 989-2400

Would be interested in selling both passes and 1% commission is an acceptable reimbursement. Would like a face-to-face meeting before new program begins.

DOMINICK'S FINER FOODS

Larry Nauman, Vice President 562-1000 (Rick Simpson)

Would be interested in selling monthly only at a 5% commission rate, but would consider a 3% and no less than 3%.

JEWEL FOOD STORES

Frank Eckstein, Vice President 531-6892
Joe Jackson 531-6218

Are interested in hearing more about the "administrative" side of passes. Feel that when token sales decrease, they may be better off with the pass--also, less "booth" work since most people buy tokens each week. Feel that 40¢ per pass, each type, including bi-weekly and monthly and also discount would be the bare minimum--must calculate administrative costs.

Asked if an exclusive contract (supermarket chain) only would hold the commission fee requested down and they thought that might be a possibility.

AMERICAN NATIONAL BANK

Michael Hennessey 661-5053

Is interested in selling both the monthly and bi-weekly, must receive a commission of \$1.04 per pass.

CHICAGO BANK OF COMMERCE

Joseph Kerr 861-1539

CITY	BASE FARE	MONTHLY PASS TYPE/COST	COMMISSION PERCENTAGE COST	HOW IMPLEMENTED
AC Transit Oakland, California	Adult 50¢ Sr./Hand. -25¢ peak 10¢ non-peak	Adult Local \$18.00 Express - add 25¢ each time pass is utilized	4% 75¢ each pass	Passes sold on consignment. Seller subtracts 75¢ for each pass sold and returns unsold passes with this amount. Commission of 75¢ was negotiated by larger chain stores selling passes.
Orange County Transit District Garden Grove, Calif.	Adult Local - 50¢ Adult Express-\$1.25 Sr./Hand. Local-25¢ Express -60¢ Non Peak - Free	Adult Local \$17.50 Express \$43.75 Senior \$10.00 Student (Elen/ College) \$13.00 40 ticket coupon \$19.00	2% 35¢ 2% 88¢ 2% 20¢ 2% 26¢ 2% 38¢	Contract basis-consignment sales, seller computes Commission owed and deducts from payment. Payment due by 20th of month
Metro Transit Commission St. Paul, Minn.	Adult - 50¢ Downtown - 10¢ Transfer - Free	Adult Local \$20.00	NOTE: Any order of 200 or more of any one pass receives a 10% discount, however, passes are paid for in advance.	Purchase Orders - Orange County sends passes and bills these accounts less the discount
San Francisco Muni- cipal Railway San Francisco, CA	Adult - 50¢ Sr./Hand. - 5¢ Students - 25¢ Transfers - Free	Adult \$16.00 Sr/Hand \$2.50	\$2.50 per pass to employers using pay- roll deduction method. 13%	Company bills the accounts for \$17.50 for each pass. Other locations selling are MTC's.
Southern California RTD Los Angeles, CA	Adult-65¢ Transfer-20¢ Seniors-30¢ " -10¢ Stud (elen/High) 50¢ 20¢ College 65¢	Adult Local \$26.00 Express \$34.00 \$42.00 \$50.00 \$58.00 \$66.00 Sr/Hand \$ 6.00 Stud (Elen/High) \$16.00 College \$20.00	3% for each pass 78¢ \$1.02 1.26 1.50 1.74 1.98 .18 .48 .60	RTD employees deliver and pick up unsold passes and payment at end of month Commission is computed at this time. NOTE: Loss of prepayment of fares with this method.

PRELIMINARY

TITLE VI IMPACT ANALYSIS
of
AN ALTERNATE FARE STRUCTURE PROPOSAL

Prepared by CTA Human Resources
Data supplied from Operations Planning

April 1983

ALTERNATE FARE STRUCTURE PROPOSAL
TITLE VI IMPACT ANALYSIS

INTRODUCTION

The Chicago Transit Authority has found it necessary to consider an Alternate Fare Structure as a direct result of the number of dollar bills being deposited in fare boxes daily, causing high and continued cost of counting and processing currency and repairing of fare boxes, as well as disruption in service because of defective fare boxes, and loss of revenue because of short fares (1/2 dollar bills). A secondary issue, misuse/abuse of transfers, combine to make appealing the concept of a single fare, no transfer structure desirable. At the same time it is projected that an increase in ridership may also result.

COMPLIANCE WITH TITLE VI

Title VI of the Civil Rights Act of 1964 provides that

"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance".

The U.S. Department of Transportation also includes this reference in all its grant contracts, further emphasizing that

such grant contracts are contingent upon current and continued compliance. The Authority supports these requirements and has therefore undertaken a Title VI Impact Analysis of this Alternate Fare Structure Proposal.

ALTERNATE FARE STRUCTURE PROPOSAL

METHODOLOGY

The assessment for this study will be conducted in the following manner:

- A. Assessment by type of rider
- B. Assessment by analysis of type of rider
- C. Assessment by potential impact
 - 1. By route designation
 - 2. By auto availability
 - 3. By income and employment
- D. Conclusions

ALTERNATE FARE STRUCTURE PROPOSAL
ASSESSMENT BY TYPE OF RIDER

NO ADVERSE IMPACT

Bus only: savings of .40 over current fare.

Rail only: savings of .15 over current fare.

Bus--Bus: no change in basic current fare with transfer.

INVESTIGATION FOR ADVERSE IMPACT

Bus-Rail: additional cost of .25 over the current fare with transfer.

Rail--Rail: any adverse impact (.50 over the current fare with transfer) would be subject to availability and permissability of rail to rail transfers; i.e. intra station transfers (center platform transfer, outside/inside platform transfers serving more than one line, and over/under stairway crossover transfers) or State St. to Dearborn subway passageway. If transfers allowed .25 saving over current fare with transfer would be realized.

Bus--Bus--Bus: .50 over the current fare with transfer.

Bus--Bus--Rail: .75 over the current fare with transfer.

Bus--Rail--Rail: \$1.00 over the current fare with transfer
if rail to rail transfers are not permitted and

.25 over the current fare with transfer if
rail to rail transfers are permitted.

Bus--Bus--Bus--Bus: \$1.00 over the current fare with
transfer.

Bus--Bus--Bus--Rail: \$1.25 over the current fare with
transfer.

ALTERNATE FARE STRUCTURE PROPOSAL
ANALYSIS BY TYPE OF RIDER

BUS, ONLY

Typically 26.4% of CTA adult cash fare weekday riders utilize a bus only mode of transportation; reduced cash fare riders, 41.5%. While there is no adverse impact for these riders, there is the net effect of 44.5% reduction to the rate of fare.

RAIL, ONLY

18.4% of the adult cash fare weekday riders utilize a rail, only, mode of transportation; reduced fare riders are less than 5.6%. These riders would realize a 16.7% reduction in the cost of a ride, while again, no adverse impact is identified.

BUS TO BUS

15.2% adult cash fare riders and 32.1% of all reduced fare riders utilize a two-bus ride typically on each trip on each weekday. For these riders no increase in cost is realized and no adverse impact identified.

The above group of three types of riders represent a total of 60% of the adult cash fare ridership and 79.2% of the reduced cash fare ridership for a typical weekday in the system. Over half of this group enjoys a substantial savings while none experiences any adverse impact as a result of the proposed change.

BUS TO RAIL

25.6% of the adult cash fare riders and 9.4% of the reduced cash fare riders utilize a bus to rail trip on a typical weekday. Financially, these riders would face a 25% increase in a one way fare.

RAIL TO RAIL

Only 1.6% of the adult cash fare riders utilize a rail to rail trip on a typical weekday. Reduced fare riders fall below 2500 total daily riders.

This is an optional trip by the rider and generally could be obtained at a single rate (.75) fare.

BUS TO BUS TO BUS

4% of the adult cash fare and 7.5% of the reduced cash fare daily riders fall within this category. The need for this type of ride exist primarily in the North West and far South West sides of the City. Minority/non-minority composition of this ridership is about equal.

BUS TO BUS TO RAIL

This ridership pattern is similar to that of the bus to bus to bus mode. 6.4% of the adult cash fare daily ridership would be affected, compared to 1.8% of the reduced cash fare daily riders. Again the minority/non-minority ridership is about equal.

BUS TO RAIL TO RAIL

Less than 0.4% of the adult cash fare and less than 1%

of the reduced fare daily riders follow this mode. The fare for this type of ride is generally consistent with that of the bus to rail rider.

BUS TO BUS TO BUS TO BUS

This type of rider represents .8% of the adult cash fare and 1.8% of the reduced cash fare rider.

BUS TO BUS TO BUS TO RAIL

1.6% of the adult cash fare and less than 1% reduced cash fare daily riders fall within this category.

ALTERNATE FARE STRUCTURE PROPOSAL
ANALYSIS BY ROUTE DESIGNATION

The north-south/east-west grid patterns of the Chicago Transit Authority's overall system provides transportation for 98% of the City's population such that service is available within a 3/8 mile radius, and most trips can be accomplished with a two-vehicle ride.

Seven bus routes are identified which, facially, could have the effect of requiring more than a two-vehicle ride. Four of these routes -- #49A, S.Western; #52-A, S. Kedzie; #54A, North Cicero/Skokie Blvd; #86, North-Narragansett -- are classified as non-minority routes. The remaining three -- #48, S.Damen; #75, 74-75th St.; and #111, 111th-115th St. -- are classified as minority routes. Together these seven routes represent 2.25% of the total weekday bus riders.

The highest ridership of these seven routes being reviewed occurs on the #75 route -- 9,483 weekday riders (originating). Only 11% of this total utilize more than a two-vehicle ride.

#54A, North Cicero/Skokie Blvd. has the least ridership, 1810 weekday riders, of the seven routes. Less than 4% of these riders require more than a two-vehicle ride.

Riders using the #111 route would be most severely impacted by this proposal although the ridership represents less than

0.5% of the total ridership. 91.8% of this ridership is minority, and three or more vehicles generally are required for each trip taken.

Ridership on the remaining four routes #48, #49, #52 and #86, reflect percentage of 10% or less where more than two-vehicles are required for trip.

TITLE VI IMPACT ANALYSIS
BY AUTO AVAILABILITY

With balance equity established for most of the system, we look at Auto Availability of the riders using the seven routes under further study in terms of comparison within this group, and within the total system.

The seven routes under review are now assessed by Auto Availability:

<u>ROUTE</u>	<u>% NO CAR AVAILABLE</u>
48 So. Damen	77
49A So. Western	77
52A So. Kedzie	76
54A No. Cicero	82
75 74th-75th	84
86 Narragansett	75
111 111th-115th	75
System Average	71
Minority	78.6
Non-Minority	77.5

The overall average percentage of riders in this group who have no car available is 78%, somewhat above the system average of 71%. However, the average percentage of minority riders who have no auto available is 78.6% while non-minority is 77.5%.

TITLE VI IMPACT ANALYSIS
BY FAMILY INCOME AND EMPLOYMENT

Family income is the final element of this review for Title VI Impact. Here we examine Family Income of passengers on the seven routes identified for comparison within the group and within the total system.

Continuing the analysis of the seven routes under review, we next look at family income:

		<u>% Income</u>			
		<u>0-\$10,000</u>	<u>\$10,000-\$20,000</u>	<u>\$20,000-\$30,000</u>	<u>Over \$30,000</u>
48	So.Damen	48	38	9	5
49A	So.Western	50	27	12	11
52A	So.Kedzie	47	32	15	6
54A	No.Cicero	37	47	10	7
75	74th-75th	59	31	6	4
86	Narragansett	48	31	14	7
111	111th-115th	54	32	8	6
System Average		42	35	13	10
Minority		53.6	33.6	7.6	5.0
Non-Minority		45.5	34.2	12.8	7.7

<u>ROUTE</u>	<u>% EMPLOYED</u>
48 So.Damen	65
49A So.Western	58
52A So.Kedzie	67
54A No.Cicero	82
75 74th-75th	66
86 Narragansett	66
111 111th-115th	65
System Average	76
Minority	65.3
Non-Minority	68.25

CONCLUSIONS:

The long established grid pattern of the Chicago Transit Authority's rail and bus lines make it one of the most easily understood in the industry, while providing access to any location in the City from any location in the City. Generally a rider is within 3/8 mile of transportation regardless of place of origin. This has held true in spite of recent service adjustments as a result of budget constraints.

Inasmuch as the Proposed Alternate Fare Structure is limited to fares, necessary time, convenience and other factors are assumed to remain unchanged. The limited scope of this analysis seeks to answer the question: are minorities as a group adversely impacted by the proposed change as opposed to non-minority?

We first examined types of rider system-wide (number of modes of transportation used) and determined that clearly 60% of the adult fare ridership and 79% of the reduced fare daily ridership will not be negatively affected by the proposed change. In fact, some actual savings may be realized. The remainder of the ridership is generally spread evenly about the City communities.

By route designation we determined that only seven routes -- three minority and four non-minority -- were suspect of potential adverse impact because these riders may require more than one-vehicle change to complete a daily trip. From our origin and destination data, we determined that, while the number of riders serviced in these areas is small compared to the system totals,

the highest impact occurs on the three minority routes -- #48, #75, #111 -- with the #111 being the most severely affected. The geography of this area (interruptions of streets by expressways, narrow streets and factory construction) place an added burden on these low density populated residencies. Specifically, the Roseland Community and, to a lesser extent the West Pullman community, are the most affected.

The next area of concern was that of Auto Availability. Here we sought to examine auto availability of riders using these seven routes and to compare them with one another and with the system averages. A difference of less than 2% between minority and non-minority riders was determined to exist on the seven routes.

Finally, we assessed family income and employment of riders along the seven routes for intergroup comparison and for comparison with the system averages. Although both groups are below the system average for employment, their comparative difference is small - 65.3%, minority; 68.25%, non-minority. However the income levels of minorities are considerably below those of non-minorities in the \$20,000 to \$30,000 category, almost the same in \$10,000-20,000 category, and slightly above in the 0-\$10,000 category. In the over \$30,000 category the numbers are smallest and yield 5% for minorities and 7.7% for non-minorities.

61.6% of the adult cash fare and 79.2% reduced cash fare daily riders experienced no increase in rate of fare over the present fare structure. 25.6% of the adult cash fare riders and 9.4% of the reduced cash fare riders could experience a 25% increase in fare with opting to use the Rapid Transit System in conjunction with a bus ride. Because of its speed and distance, the Rapid Transit System is considered to be a premium service.

12.8% of the adult cash fare riders and 11.4% of the reduced cash fare daily riders would on a flat fare basis experience an increase. There is however no major adverse impact on minorities as a group in terms of cost alone, or as it applies to auto availability or family income. Two minorities communities have been identified in which the riders will be faced with continued multi-modal, multi vehicle rides. This impact would be felt in terms of higher cost.

Bi-weekly passes and monthly passes are proposed as a system wide option to riders who elect this cheaper, more convenient method of fare payment.

REGIONAL TRANSPORTATION
EXPRESS BUS
AND EVANSTON SURCHARGE
RECOMMENDATIONS

REGIONAL TRANSPORTATION, EXPRESS BUS, AND EVANSTON SURCHARGE RECOMMENDATIONS

REGIONAL TRANSPORTATION FARES

There are at least three alternatives to consider in treating the RTA originating rider who transfers to the CTA system and whose RTA transfer is equivalent to a CTA transfer and vice versa. These are:

1. Cut the RTA bus fare to 50¢ as CTA will issue no transfers.
2. Accept RTA transfers only at first point of contact with RTA bus routes and issue either special CTA transfers or RTA transfers to persons bound for RTA bus routes.
3. Cut the CTA fare to 50¢ bus, 75¢ rail no transfers, leave the RTA fare structure alone and expect all RTA/CTA riders to purchase monthly or bi-weekly passes.

The first item treats the RTA bus system equally as the CTA system and poses no problems to CTA but creates internal RTA problems in that its local fare is now 60¢ with a 90¢ through fare and 10¢ for a transfer. If the bus fare is cut to 50¢ with no transfers, RTA breaks even regarding revenue from RTA/CTA passengers, but loses revenue on current intra-RTA 90¢ and 60¢ rides. This is a major problem to RTA in the collar-county operations of Elgin, Aurora, Joliet, etc. RTA personnel have not responded positively on this proposal.

The second proposal of not changing the RTA fare structure but continuing to issue transfers valid on CTA is acceptable to RTA personnel provided CTA would likewise issue transfers (possibly even RTA transfers). This poses several problems to CTA. If we accepted RTA transfers, would we impose a 25¢ surcharge on rapid transit so that the RTA/CTA rail fare was \$1.25 similar to CTA bus/CTA rail or impose no surcharge, making the RTA/CTA rail fare \$1.00 compared with CTA bus/CTA rail fare of \$1.25? We would need to impose a rail surcharge to these rides.

If CTA issues a transfer valid only on RTA routes, how would these transfers be distributed on the CTA system? Currently about 6,000 RTA transfers are received on CTA bus routes and 6,500 on CTA rail routes. Some RTA transfers originate in collar county cities such as Elgin whereby the riders use Elgin buses to the RTA rail station, ride a commuter train and then use the

transfer on CTA shuttle buses downtown. Even if transfers were issued only to bus operators whose routes connected with RTA, there would be a requirement for virtually all routes on the system and a difficult time explaining the procedure to the rider and accounting for these transfers which is one of the reasons for our overall "no-transfer" fare proposal.

While the exchange of transfers proposals reserves equity of fares for the RTA/CTA riders compared with CTA/CTA riders, it becomes a very difficult procedure to manage.

The third proposal of CTA and RTA each going its own way regarding fares creates a fare inequity to RTA/CTA riders compared to CTA/CTA riders. An RTA bus/CTA bus fare would become \$1.40 compared with CTA bus/CTA bus fare of \$1.00. An RTA bus/CTA rail fare would become \$1.65 compared with CTA bus/CTA rail fare of \$1.25. In other words, RTA/CTA riders would pay a penalty of 40¢ per trip unless they purchased monthly or biweekly passes.

It is recommended that a compromise whereby RTA transfers would be valid and accepted on the CTA system at point of entry to CTA and not reissued. Persons going from CTA to RTA would have to pay the CTA fare of 50¢ bus or 75¢ rail and then the RTA 90¢ fare. This would preserve the current inbound fare and impose a 40¢ outbound penalty.

EXPRESS BUS

It is recommended that persons riding the #2, 6, 124, 99, 99M, 147, 162 and 164 routes would pay 50¢ inbound to downtown and 75¢ outbound as they leave downtown. This would be an average fare of 62.5¢ intermediate between local bus and rapid transit fares.

EVANSTON FARES

It is recommended that local bus fare on routes #201, 202, 203 and 204 will be 50¢. Fare on Evanston rail service will be 75¢ whether the ride is local to Evanston or through to Chicago with a transfer at Howard station. All persons riding southbound Evanston Express trains south of Howard station will pay a 25¢ express surcharge. This will require the issue of express identification checks.

April 26, 1983



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